KERAMIDA
ENVIRONMENT • HEALTH • SAFETY
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Indianapolis, Indiana 46202
(317) 685-6600 • Fax (317) 685-6610
1-800-508-8034
keramida@keramida.com • www.keramida.com

November 3, 2006

Indiana Finance Authority
C/O Indiana Brownfields Program
Attn: Sara Westrick Corbin
100 North Senate Avenue, Room 1275
Indianapolis, IN 46204

RE: IFA Request for Qualification – Remediation Services

Dear Sara,

KERAMIDA Environmental, Inc. (KERAMIDA) is pleased to present this response to the IFA Request for Qualification – Remediation Services, issued on October 19, 2006. All information provided within this response, to the best of our knowledge, is accurate and complete.

KERAMIDA is able to provide the level of service required by the scope of work. Our depth of experience and the available staff ensures we can meet this requirement. KERAMIDA does not have any conflicts of interest relative to the performance of the contractual services detailed in the request. Further KERAMIDA does not have any past and/or current relevant criminal investigations, pending litigation, regulatory or civil enforcement actions that we are involved with.

The redevelopment and success of our communities will ensure the prosperous future of Indiana. KERAMIDA has been an active participant in the past and is currently involved with many brownfield redevelopment projects. Selection as the consultant responsible for one or two of the regions will ensure success in those regions.

Sincerely,
KERAMIDA Environmental, Inc.

Andrew A. Gremos, LPG, CHMM
Senior Vice President, Land Services

Enclosures

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STATEMENT OF QUALIFICATIONS AND PROPOSAL FOR INDIANA FINANCE AUTHORITY REMEDIATION SERVICES KERAMIDA PROPOSAL NO. P12249

Submitted to:

Indiana Finance Authority
C/O Indiana Brownfields Program
Attn: Sara Westrick Corbin
100 North Senate Avenue, Room 1275
Indianapolis, Indiana 46204

Submitted by:

KERAMIDA Environmental, Inc.
401 North College Avenue
Indianapolis, Indiana 46202
317-685-6600
800-508-8034
www.keramida.com

Andrew A. Gremos, L.P.G., C.H.M.M.
Senior Vice President, Land Services

November 3, 2006

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ATTACHMENTS

1.0 GENERAL INFORMATION

1(a) Primary Point(s) of Contact and Firm Location

KERAMIDA Environmental, Inc. (KERAMIDA), a full service WBE environmental firm, is headquartered in Indianapolis, Indiana, and has two other offices in the Midwest. The information for the headquarters is as follows:

KERAMIDA Environmental, Inc.
401 North College Avenue
Indianapolis, IN 46202
Phone: (317) 685-6600
Fax: (317) 685-6610
Company Email: keramida@keramida.com
Company Website: www.keramida.com

The points of contacts are as follows:

Andrew A. Gremos, LPG, CHMM
Senior Vice President, Land Services
(317) 685-6606
agremos@keramida.com

Ann D Luther, PE
Brownfields & Construction Management Coordinator
(317) 631-9576
aluther@keramida.com

1(b) Firm Description and Capabilities

KERAMIDA a full service engineering and consulting firm, specializing in providing comprehensive, innovative and cost-effective solutions to all stakeholders in Brownfields Redevelopment. KERAMIDA serves industry and government worldwide with a full range of environmental engineering, compliance and management, remediation, health and safety, energy use reduction, training, and ISO 14001/OHSAS 18001 services KERAMIDA's clients include industry, state agencies, cities and counties, schools, financial institutions, insurance companies, developers and law firms. Established in 1988, KERAMIDA is a woman owned business enterprise (WBE) registered with the state of Indiana (Attachment 1), as well as other states and municipalities. A copy of our Indiana WBE Certification is provided in Attachment 1. Dr. Vasiliki Keramida is the President and CEO of KERAMIDA and is the largest shareholder of the company. Headquartered in Indianapolis, Indiana, KERAMIDA employs 60 environmental professionals and support staff throughout its four offices and is in good standing with all State of Indiana agencies, quasi agencies and affiliated entities.

KERAMIDA principals have worked for over 25 years in the environmental arena and are recognized leaders in their fields. The firm's technical staff possess certifications and registrations in over 30 different areas of expertise and hold patents and over 30 M.S. and Ph.D. degrees. Due to the depth of talent and expertise in KERAMIDA has the ability to address many and varied client demands while always ensuring that only the highest quality of service is provided. KERAMIDA employs 8 Licensed Professional Geologists (Indiana) and 1 Professional Geologist (outside Indiana) and 5 Registered Professional Engineers (Indiana) and 3 Registered Professional Engineers (outside Indiana). These seventeen individuals, all in good standing, would be available to either directly or indirectly contribute to the project at hand.

KERAMIDA understands and shares the mission of the Indiana Financial Authority to "*. . . provide efficient and effective financing solutions to facilitate state, local government and business investment in Indiana.*" Brownfield Redevelopment, including PRGI sites, has long been an area in which KERAMIDA excels. KERAMIDA principals have worked for over 25 years in this environmental field and offer technical expertise coupled with regulatory experience. KERAMIDA personnel are well versed with IDEM's RISC procedures outlined in the RISC Technical and User Guide and are very familiar with CERCLA, RCRA, the Indiana Spill Rule, the UST statute, VRP statute, and the ELTF statutes. Staff are often asked to lecture on these rules and guidance including recent updates and their impacts on projects. KERAMIDA also reviews and comments on investigation and remediation plans on behalf of IDEM for projects in the VRP.

Brownfield remediation services provided by KERAMIDA have included assessment and mitigation of environmental liability, prioritization of brownfield properties, identification of potential redevelopment resources, preparation of financial assistance proposals, development of community relations/public involvement plans, and investigation and remediation activities on behalf of the stakeholders. Our proven technical expertise and results oriented approach has continually demonstrated that KERAMIDA is a leader in the brownfields arena. The keys to our success lays in our ability to successfully engage in community outreach and stakeholder relations and our proficiency in the proper analysis of data to determine the most cost productive redevelopment sites. These skills along with KERAMIDA's active network of local economic development councils, community and government leaders, developers and attorneys result in shovel ready sites and reinvigorated communities ripe for economic opportunities and growth.

Project sites have ranged from the corner gas station and neighborhood dry cleaner to large manufacturing facilities. As a result of KERAMIDA's involvement, brownfield stakeholders have received needed funding resources for the assessment and cleanup of numerous redevelopment projects. With the assistance of KERAMIDA, numerous communities have been able to successfully redevelop brownfields properties in a timely manner. Examples of recent brownfield project experience are detailed below.

Studebaker Stamping Plant, South Bend, Indiana
KERAMIDA completed a remediation of petroleum impacted soil adjacent to Building 93 at the former Studebaker Stamping Plant property located in South Bend, Indiana. The work was performed as a part of the Studebaker/Oliver Redevelopment Project using PRGI funding. The project involved the excavation and disposal of approximately 670 cubic yards of petroleum contaminated soil. Residual impacts that extended beneath the building were evaluated through risk assessment. Compound-specific analyses were used to demonstrate that no unacceptable risks to human health were present in the soils where TPH concentrations exceeded default cleanup goals. IDEM agreed with the findings of the evaluation and no further action was required.

Burnham's Sporting Goods, West Lafayette, Indiana
KERAMIDA has completed a Brownfields Investigation (Investigation) and PRGI- related activities at the Burnham's Sporting Goods property located in West Lafayette, Indiana. West Lafayette is planning to redevelop the property in partnership with Purdue University as a rowing clubhouse facility for student athletes and the public. The project is located adjacent to the highly successful Wabash Landings development on the west bank of the Wabash River. The Site was the location of a former municipal dump, which presented a unique challenge for Site characterization and plans for future construction. Because of the heterogeneous nature of the dump's fill layer, the Investigation was designed to collect sufficient data to determine Site-specific exposure concentrations that could be compared with conservative human-health based closure levels. Chemicals of potential concern (CPOC) detected in the fill layer included several metals and an isolated spot of chlorinated hydrocarbons. A screening-level human health risk assessment (HHRA) of potential adverse health effects from Site CPOCs showed that Site-specific exposure concentrations were below human-health based closure levels. To provide additional protection for future Site users, an isolated area of elevated lead concentration in surface soil was excavated and disposed. There were seven underground storage tanks also removed using PRGI funds. An Environmental Restrictive Covenant will be applied to the property to provide added protection for future Site users by restricting groundwater use and excavation of soils at the Site. In addition, innovative foundation construction methods will be used so that material from the old municipal dump fill layer can remain in place.

2451-53 North Delaware, Indianapolis, Indiana
This mixed commercial/residential redevelopment of a former gasoline service station on Indianapolis' near east side required a quick-turn assessment of environmental conditions and removal of USTs using EPA UST Fields Pilot Project funds. Initially, a geophysical survey and exploratory trenching were required to locate and assess the number, condition, and contents of the USTs. Then, using EPA funds and a less than a month timeframe, the USTs were removed and a soil and groundwater investigation completed to characterize the Site for closure through the Indiana Brownfields Program. There were three USTs, associated piping, and impacted soil removed. Investigation data indicated no petroleum impacts to soil and groundwater above human-health closure levels, however, tetrachloroethene from an adjacent former dry cleaner was detected in groundwater. An environmental deed restriction prohibiting use of groundwater and the incorporation of vapor abatement controls into future building plans were used to protect human health, satisfy regulatory concerns, and obtain a Brownfields Status Letter. New

construction with first-floor commercial/retail space and over-head living space has been completed to service the emerging Fall Creek Place community.

Former Scott Manufacturing Facility, Scottsburg, Indiana
KERAMIDA has completed extensive remedial investigations and remedy pilot testing at the former Scott Manufacturing Company, located in Scottsburg, Indiana. This site was used from the 1960s to the 1990s to manufacture steel and aluminum automotive components. In 2002, the City of Scottsburg entered the Property into the IDEM Voluntary Remediation Program (VRP). The IDEM Brownfields Program is co-managing the project with the VRP.

KERAMIDA completed delineation of soil and groundwater contamination at the property by installing soil borings, shallow and deep groundwater monitoring wells, and analyzing soil and groundwater samples. In 2003, KERAMIDA prepared a conceptual Remediation Work Plan for the site City of Scottsburg's USEPA Brownfields Remediation Grant Application. USEPA used the work plan to evaluate the City's application and awarded the City a $200,000 grant for remediation of the site. The initial approach involved the use of biostimulation to remediate petroleum and chlorinated solvent impacted source area. Preliminary bench testing showed mixed results. Supplemental bio-bench testing as well as chemical oxidation bench testing was performed to further evaluate these technologies. Based on the supplemental testing it was determined that neither biostimulation nor chemical oxidation were appropriate to remediate the source area. An alternate method involving pumping and treatment with discharge to Scottsburg wastewater treatment plant was proposed and approved by IDEM in May 2005. The pilot testing of the pump and treat system was completed in early 2006. With the assistance of KERAMIDA, Scottsburg recently received a supplemental grant of over $300,000 from the State of Indiana to complete remediation of the source area. KERAMIDA is currently implementing the proposed remedy.

Swayne Robinson and Company Foundry, Richmond, Indiana
The former Swayne Robinson and Company facility was an abandoned former gray iron foundry in downtown Richmond, across from the Courthouse and City Hall. The County desired to build a new County Jail at that location, and retained KERAMIDA to complete an environmental assessment and remediation activities, and to coordinate all such activities through the IDEM Brownfields Program. The County Commissioners were also aware of the high level of public concern regarding potential environmental contamination at the site and the potential risks to future workers and inmates at the planned jail. Therefore, throughout the project KERAMIDA provided supplemental letters and other support to the Commissioners for use in communicating the progress and results of the investigation and remediation activities to the public.

KERAMIDA completed a wide range of activities at the site including demolition material sampling and analysis; foundry waste characterization and disposal; asbestos inspections and abatement; UST removal, investigation, and closure; site-wide sampling and analysis of soil and groundwater; sampling and analysis of waste material uncovered during building footer construction; coordination with City and County officials for disposal of petroleum and foundry wastes and discharge of accumulated runoff from construction excavations; and a site-specific risk assessment under both residential and commercial land use scenarios. The IDEM

Brownfields Program concurred with the conclusions of KERAMIDA's risk assessment and issued a Comfort Letter. The site has since been successfully redeveloped as a jail.

1(c) Approach and Timeline

KERAMIDA has examined the Proposed Scope of Work and timeframes set forth in the Calendar section of this RFQ and can meet and perform all established tasks and deadlines. KERAMIDA has the qualifications, experience, expertise, and workforce power to undertake all the provisions and following general tasks of this project. KERAMIDA's overall approach for the project is presented below.

(a) Identify possible sites eligible for PRG funding (Brownfields Program staff will provide educational materials to firms and will determine eligibility of identified sites.

Month 1 -Communication, Information Gathering and Community Outreach:

KERAMIDA will be able to immediately administer this plan, as a result of its ongoing community outreach and connections in the Brownfields arena. Once the contract has been awarded KERAMIDA will meet with the assigned IFA project manager to obtain various educational and informative project materials and review plans for informing the communities within the region(s). KERAMIDA plans to use various medias - local papers, direct emails, local edc's, and so forth. to (1) detail the opportunity and (2) explain what types of data communities should begin to assemble. Examples of said information would include economic developmental plans, environmental studies, and community support records, such as minutes from local meetings.

At the same time KERAMIDA will begin working with the assigned IFA project manager to establish selection criteria and review current submittals and key potential sites. KERAMIDA recognizes the expertise and insight of IACT and LISC will certainly be key to any regional success and will use their services and input in the performance of this section for the project. During this period KERAMIDA will begin to schedule/invite communities to meet with our site identification team (Andrew Gremos, Ann Luther and Frank West) to discuss/review opportunities. Special attention will be given to communities with populations of less than 10,000 to ensure they have equal access to the program.

Month 2 - Data Collection:

KERAMIDA will set up 1/2 day "workshops" at a select few locations throughout the region(s) wherein they will meet with various political subdivisions to review and discuss the opportunities provided per this PRGI initiative.

Month 3 – Data Analysis and Prioritization:

Once initial meetings and data collection have concluded, KERAMIDA will analyze all submitted information and, applying the criteria established with IFA, determine and prioritize which projects should be pursued. KERAMIDA will then conduct community outreach meetings with the IFA Project Manager in order to determine the level of community support for the various sites. KERAMIDA will then make a final assessment of data and submit for approval a prioritized list of projects. KERAMIDA anticipates working very closely with the assigned IFA project manger in the effort to meet the stated IFA goal " . . . . *provide efficient and effective financing solutions to facilitate state, local government and business investment in Indiana.*"

In order to realize the greatest efficiencies, KERAMIDA will be using a "rolling submissions" approach with the IFA project manager.

Months 4-6:

(b) Perform limited investigation to determine past practices and location, size and contents of tanks (type/quantity) and to complete delineation of petroleum contamination.

KERAMIDA's Primary Project Managers, Frank West, Andrew Sargent and Brian Harrington, will review available technical and environmental information in order to determine data gaps and the need for additional information. Proposals will be prepared for limited site investigations as needed. Upon approval by IFA, the limited site investigations will be performed under the direction of the Primary Project Manager.

Months 7-8:

c) Evaluate available technical information to develop and submit scopes of work for approval per IDEM's Risk Integrated System of Closure (RISC) guidelines.

Primary Project Managers, Frank West, Andrew Sargent and Brian Harrington, using the expertise of the entire KERAMIDA team as needed, will develop and submit scopes of work per RISC guidelines to complete required petroleum remediation activities. These scopes of work and costing will be submitted to the IFA project managers for approval.

Months 9-18:

(d) Coordinate remediation activities with political subdivisions

KERAMIDA will keep the affected community leaders, developers, EDC's, communities, and governmental agencies, apprised and involved in the process and progress of associated projects. KERAMIDA will work with all political subdivisions involved to ensure the most cost effective

and efficient method of remediation activities. KERAMIDA recognizes the importance of keeping the IFA project manager part of these communications and schedules.

(e) Conduct all necessary technical activities to complete petroleum remediation in accordance with the approved RICS work plan, include but not limited to

(1) Project specific health and safety plan development and implementation
(2) Storage tank removal
(3) Soil/groundwater sampling
(4) Remedial system design/implementation/installation/operation
(5) Project management
(6) Confirmatory sampling
(7) Interim project reporting
(8) Contaminant transport modeling
(9) Remedial system maintenance
(10)Closure sampling
(11) Final project reporting
(12) Project invoicing
(13) Drum/container removal
(14) Other tasks deemed necessary to achieve remedial goals such as:
Vapor intrusion
Risk assessment

KERAMIDA will execute with the highest quality of service all required technical activities to provide complete and thorough petroleum remediation with accordance with the approved RISC work plan. KERAMIDA has had extensive experience with RISC projects and is fully knowledgeable as to it requirements.

1(d) Project Team

KERAMIDA has assembled a strong and effective team of environmental professionals for performance of this project. Acting as principal for this project will be Andrew Gremos. He along with Ann Luther will assume primary responsibility for the community outreach and site identification portion of this project. They will be assisted by Frank West and other key KERAMIDA personnel as needed.

The project will be scoped, costed and managed by Frank West, Andrew Sargent and Brian Harrington. Their services will be supported by senior technical advisors and select environmental experts in the following fields: Engineering, Geology, Risk Assessment, Construction Management and Field Services.

In addition to the information below, in Attachment 2 you will find individual resumes and a copy of KERAMIDA's Technical Staff Summary table, showing the education, years of experience and areas of expertise for all KERAMIDA's technical staff.

Primary Contact:

Andrew Gremos, L.P.G., C.H.M.M., Senior Vice President, Land Services
Mr. Gremos will be the Principal on this project. He is a Licensed Professional Geologist in many states, including Indiana and a Certified Hazardous Materials Manager and holds B.S. and M. S. degrees in Geology/Hydrogeology from IU and Old Dominion University. His work over the last 17 years has focused on investigations and remediation of multiple-contaminant properties, including contaminant fate and transport, groundwater modeling, soil vapor intrusion modeling and advanced remedial processes. He has worked on thousands of sites including industrial facilities, public utilities, gas stations and complex terminals under CERCLA, RCRA, VRP, LUST and Brownfield programs. He has served as expert witness on many occasions and has received numerous awards, including a major oil company's award for his innovative remedial design. He is a member of the KERAMIDA Litigation Experts Group.

Alternate Contact:

Ann Luther, P.E., Brownfields & Construction Management Coordinator
Ms. Luther has a BS in Civil Engineering from Purdue University and a Master of Arts from Webster University. She is a Registered Professional Engineer in Indiana. Ms. Luther has over 20 years experience in the construction industry, including managing design and construction projects from design concept to building turnover. Her experience includes managing sub-contractors, preparing bidding packages, negotiating contracts and modifications, developing scope of works, preparing contracts and specifications and acting as an owner's representative.

Ms. Luther has leadership experience in the field of environmental community outreach including, but not limited to extensive background in grant writing assistance, community networking and environmental justice. She also managed the USEPA UST Removal Program for the state of Indiana. Ms. Luther's experience includes managing USEPA clean-up projects to ensure they were conducted in accordance with the consent decrees and the remediation plans and specifications. She also has experience managing asbestos removal and abatement projects and lead based paint removal projects.

Primary Project Managers:

Frank West, L.P.G, C.H.M.M., Senior Geologist, Investigation & Remediation Services
Mr. West has over 19 years of experience in environmental geology/hydrogeology and has managed a wide variety of investigation and remediation projects involving contaminated soils and groundwater. His experience covers various regulatory programs including Superfund, Voluntary Remediation, RCRA, LUST and Brownfields. Mr. West has both PRGI and USEPA UST Field experience, as he was a primary on both the Burnham Sporting Goods-Wabash Landings and Fall Creek Place Development projects. He is a Licensed Professional Geologist in Indiana and a Certified Hazardous Materials Manager, and holds a B.S. in geology from Ball State University. He has completed graduate studies in geology/geophysics at the University of Akron.

Andrew Sargent, Project Manager
Mr. Sargent has 16 years of experience in the environmental field and holds a B.S. degree in Geology from the University of Dayton. He has extensive experience in analytical methods, field sampling methods, and review of laboratory quality control reports. Mr. Sargent holds the position of Project Manager at KERAMIDA, and has managed projects in accordance with a variety of regulatory programs, including LUST, VRP, Brownfields, RCRA, NPDES and RISC. Mr. Sargent also has experience in Phase I and II Environmental Site Investigations. Mr. Sargent has managed remediation systems including soil vapor extraction, air sparging, landfarming, and pump/treatment of groundwater through air stripping. In regard to asbestos, Mr. Sargent has managed a great number of asbestos inspection projects and oversight of asbestos abatement projects, and is a Certified Asbestos Inspector and Certified Asbestos Project Supervisor. Mr. Sargent is a member of the Professional Geologists of Indiana and the National Ground Water Association.

Brian Harrington, Vice President, Field Operations
Mr. Harrington has over 14 years of experience in the environmental consulting field. Mr. Harrington has managed and performed field activities in hundreds of projects involving hazardous waste removals, site investigations, remediation, UST management, asbestos inspections, asbestos abatement oversight, site assessments and industrial air inspections. He holds the following certifications: Health and Safety Training - OSHA 29 CFR Part 1910 and 1926; Asbestos Inspection; Confined Space Entry; State Fire Marshal's Office to supervise, manage and direct the installation, testing, retrofitting, removal or closure of USTs; Federal Method 303 Coke Oven Inspection; and, Federal Method 9 Visible Emission Evaluation. Mr. Harrington received a B.S. in Environmental Health and Sciences from Indiana State University and has been with KERAMIDA for over 14 years.

Senior Technical Advisors:

Konrad Banaszak, Ph.D., L.P.G., Senior Vice President
Dr. Banaszak has over 30 years of experience in hydrogeology, geochemistry and investigations of contaminated properties and holds a B.S. in Geology from Beloit College and M. S. in Geology and Ph.D. in Geochemistry degrees from Northwestern University. He is a nationally recognized leader in investigations of complex contaminated sites and he is sought after for expert testimony in litigation involving contaminated properties.

Douglas Zabonick, P.E., Senior Vice President, Remediation Engineering
Mr. Zabonick is a registered Professional Engineer in Indiana, Michigan, and Ohio, and holds a B.S. degree in Geological Engineering from Michigan Technological University. He has over 22 years experience in environmental engineering, consulting and remediation. He has performed due diligence on thousands of sites and has conducted investigations and remediation at hundreds of properties impacted by petroleum, solvents, metals and other compounds under various programs, including CERCLA, RCRA, UST, VRP and Brownfields

Douglas Opell, L.P.G., Senior Manager, Hydrogeology/Groundwater Modeling Services
Mr. Opell holds B.S. and M. S. degrees in Geology from Indiana University and has over 24 years experience in the earth sciences and environmental fields. He is a Licensed Professional Geologist in Indiana, Kentucky, and Arizona. Mr. Opell has extensive experience with consulting firms representing industrial and governmental clients with technical and regulatory matters in the field of ground water contamination, environmental compliance, and geotechnical engineering.

Support Staff:

Engineering:

Robert S. Fedorchak, P.E., Senior Engineer
Mr. Fedorchak is a registered professional engineer in Indiana with 15 years of experience in remediation engineering. He has managed, designed, constructed permitted and operated remediation projects and systems for industrial, commercial, and petroleum clients throughout the Midwest. Mr. Fedorchak has managed projects in accordance with a variety of regulatory programs, including LUST, VRP, Brownfields, RCRA, Solid Waste, and Superfund, and his remedial projects have included processes ranging from active (SVE/air sparging, high vacuum dual extraction, etc.) to passive (natural attenuation, plume stability) remediation. His experience also includes engineering design, permitting and construction oversight activities for landfills. He holds a B.S. in Civil Engineering from Virginia Polytechnic Institute and State University.

Geological:

Bruce Winningham, L.P.G., Senior Geologist, Investigation Services
Mr. Winningham is a Licensed Professional Geologist in Indiana with 21 years experience and holds an M.S. in Geology from Miami University and a B.A. in Geology from Earlham College. He is primarily responsible for supervising projects that involve geologic investigations and hydrogeologic assessments at LUST, RCRA and CERCLA sites. Mr. Winningham also has PRGI experience as he was a key member of the Studebaker Stamping Plant project in South Bend, Indiana. Included in these responsibilities are cost estimating, data evaluation, statistical analysis of laboratory data and project management in conjunction with the design and implementation of soil, sediment, and ground-water sampling programs for site characterizations, ground water monitoring systems, hydrogeologic assessment reports and remedial action plans. Mr. Winningham has also performed numerous Phase I and Phase II Environmental Site Assessments for property transfers on various industrial and commercial and vacant land sites.

Prior to working as a Senior Geologist at KERAMIDA, he was a Senior Geologist with Heritage Environmental Services for ten years. Mr. Winningham was a Staff Geologist at the IDEM Office of Solid and Hazardous Waste Management and the Office of Environmental Response, for several years earlier in his career, providing geologic technical support for solid waste facility permits and LUST, State Cleanup and CERCLA programs.

Charles B Goodwin, Project Geologist
Mr. Goodwin holds a B.A. in Geology from Miami University, Oxford, Ohio. He has four years of experience and is certified in OSHA Hazardous Waste Operations and Emergency Response. Mr. Goodwin's professional experience includes the performance of Phase I and II Environmental Site Assessments, site characterizations, groundwater monitoring, and data QA/QC. Mr. Goodwin is also experienced in aquifer testing, aerial photography, clean hands mercury sampling, and the Indiana Wellhead Protection Program.

Risk Assessment:

Christina Haviland, Senior Toxicologist, Risk Assessment Services
Ms. Haviland has over 15 years of experience in risk assessment and toxicology research and application, and has performed both human health and ecological risk assessments for a plethora of projects, under various regulatory programs including Superfund, RCRA Corrective Action, VRP, Brownfields, RISC, and other state programs. She holds B.S. and M.S. degrees in Biology and Zoology from Indiana Wesleyan University and Miami University, and has practiced since 1987 in the toxicology/risk assessment field with both the U.S. EPA and the private sector. She conducted ecological toxicity research as part of her M.S. degree, and human health toxicity research at the USEPA Health Effects Research Laboratory. She is a Registered Hazardous Substances Professional through the National Environmental Health Association. She is a member of the KERAMIDA Litigation Experts Group.

Construction Management:

Steve Cobb, Project Manager
Mr. Cobb has managed and performed field activities in hundreds of projects involving hazardous waste removals, site investigations, remediations, UST management, site assessments and industrial air inspections. Mr. Cobb holds a Bachelor of Science degree in Environmental Management from the Indiana University and a Master of Business Administration degree from the University of Indianapolis. He holds the following certifications: Health and Safety Training - OSHA 29 CFR Part 1910 and 1926; Federal Method 303 Coke Oven Inspection; and Federal Method 9 Visible Emission Evaluation.

Field Services:

Doyle Flory, Field Manager
Jason Condry, Field Technician
Jason Juliano, Field Technician
Wes Rodman, Field Technician

1(e) Firm Financial Strength

KERAMIDA has been in business since 1988. The financial soundness of the company is strong. Through managed growth KERAMIDA has successfully weathered downturns in the economy with strong revenues.

1(f) Firm Health and Safety

KERAMIDA recognizes the need for a site Health and Safety Plan, that is simultaneously effective, practical, and enforceable. To achieve this, KERAMIDA develops a site-specific Health and Safety Plan from a baseline plan and an initial site survey. The site survey provides the input for developing the hazard analysis. Once approved, this comprehensive health and safety plan is implemented to protect all personnel on location. The site Health and Safety Plan is consistent with the requirements of 29 CFR 1910 and 1926 and Occupation Safety and Health Guidance Manual for Hazardous Waste Site Activities (HIOSH/OSHA/USCG/EPA, DHHS [NIOSH] Publication No. 85-115, October 1985).

KERAMIDA's safety record overall has been excellent. However, as a result of an accident in 2004, and the relatively small size of KERAMIDA at that time (58 employees), our company's EMR was above 1 for the first time in our history. Because the EMR is calculated on a 3 year running average this accident will negatively impact our number until 2007. No reportable incidents have taken place during the entire year in 2005 and in 2006 to date.

1(g) Subcontractors

KERAMIDA expects to subcontract the following services to the providers listed under each type of services. KERAMIDA has successfully completed projects in the past with each of the subcontractors listed. KERAMIDA's standard operating procedure is to request bids from three subcontractors on each specific job site. The most responsive and cost-effective subcontractor is chosen for that project. KERAMIDA is making extra efforts to use minority and disadvantaged businesses as subcontractors. CADD Research, a DBE and minority business, has been used by KERAMIDA for its CADD work performed outside the firm. Belmont Laboratories is also a DBE minority business and is used by KERAMIDA for analytical services.

<u>Emplacement of Piezometers and Permanent Monitoring Wells</u>

Earth Exploration, Inc.
7770 West New York Street
Indianapolis, Indiana 46214-2988
Mr. Richard D. Olson, P.E., Vice President
(317) 273-1690

UST/AST Removal and Heavy Equipment Services

Axis Earth Services, Inc.
9233 East U.S. Highway 36, Building R-3
Avon, Indiana 46123
Mr. Rick Heaberlin, President
(317) 271-6800

Hoosier Equipment Services, Inc.
8014 West Thompson Road
Indianapolis, Indiana 46278-1728
Mr. Charles D. Farmer, Vice President
(317) 856-2751

Wills Excavating
6268 West Stoner Drive
Greenfield, IN 46140
Mr. Jason Wills, President
(317) 894-9825

CADD

CADD Research, Inc.
8762 Robbins Road
Indianapolis, Indiana 46268
Mr. Henry Reed, President
(317) 337-9826

Geotechnical Laboratory Testing

Earth Exploration, Inc.
7770 West New York Street
Indianapolis, Indiana 46214-2988
Mr. Richard D. Olson, P.E., Vice President
(317) 273-1690

Geophysical Survey

Earth Exploration, Inc.
7770 West New York Street
Indianapolis, Indiana 46214-2988
Mr. Richard D. Olson, P.E., Vice President
(317) 273-1690

4D Consulting, Inc.
8780 Purdue Road, Suite 7
Indianapolis, IN 46268
Dennis R. Prezbindowski, Ph.D.
(317) 871-8569

Waste Transportation and Disposal
Subcontract waste haulers will be selected based on the type of waste and specific location within each PRGI Administrative Region. All subcontract waste haulers, however, will be appropriately licensed and DOT certified. Disposal of waste will depend on type of waste and location within each PRGI Administrative Region. All waste, however, will be disposed of at appropriately licensed and IDEM-approved disposal facilities.

Laboratories

The following laboratories will be considered for each project. Laboratory rate schedules for each are provided in Attachment 3.

Belmont Laboratories, Inc.
25 Holiday Drive
Englewood, OH 45322
(800) 723-5227
**Disadvantaged Business Enterprise

ENVision Laboratories, Inc.
1439 Sadler Circle West Drive
Indianapolis, IN 46239
(317) 351-8632

Heritage Environmental Services, LLC
7901 West Morris Street
Indianapolis, IN 46231
(317) 390-3129

Pace Analytical Services, Inc.
7726 Moller Rd
Indianapolis, IN 46268
(317) 875-5894

2.0 COSTS

KERAMIDA has prepared separate unit costs for petroleum investigation and remediation services for each PRGI Administrative Region. The unit costs are provided in Table 1, Attachment 4. KERAMIDA's Professional Unit Fee Schedule and Equipment Rental Rates are

summarized in Tables 2 and 3, respectively, Attachment 4. Personnel, equipment, and services will be billed in general accordance with the Excess Liability Trust Fund guidelines.

KERAMIDA will also bill a flat rate of $75 per hour to complete site identification activities. This rate applies to all technical personnel. Primary personnel to complete site identification activities include Andrew Gremos, Ann Luther, and Frank West. All clerical fees related to site identification activities will be billed at $30 per hour.

3.0 PREVIOUS EXPERIENCE

3(a) Summary of Experience with Petroleum Remediation Projects

KERAMIDA has unparalleled experience in providing the services requested in the Request for Qualifications. The firm is a current PRGI contractor and has completed projects under this program. Clients for whom KERAMIDA has conducted petroleum remediation have included various municipalities such as the City of Indianapolis, the City of West Lafayette and the City of South Bend, state agencies such as the Indiana Department of Transportation, the IDEM and Indiana Department of Corrections, law firms, lending institutions, public utilities, industry, real estate investment trusts, real estate management companies, and retail petroleum marketers. KERAMIDA has also reviewed hundreds of site investigation and remediation plans on behalf of the IDEM for projects involved in the Voluntary Remediation Program, as well as on behalf of insurance carriers and law firms. The firm is well versed in and has extensive experience with the RISC guidance and non-rule policies, various IDEM regulatory programs, and the underlying statutes.

KERAMIDA's highly qualified technical experts have developed cost-effective health-protective remedies for a variety of environmentally impacted sites in diverse geologic settings. These experts include professional geologists, engineers, risk assessors, construction managers, as well as other relevant disciplines. KERAMIDA has designed and implemented numerous remedies for petroleum impacted sites. Remedies have ranged from soil excavation and disposal to in-situ biological and chemical treatment to engineered in-situ remediation systems (such as soil vapor extraction and air sparging). Risk assessment has played a key role in most remedial designs balancing cost-effectiveness with human-health and environmental protection. KERAMIDA has also been at the forefront and has significant experience with emerging issues such as soil vapor intrusion and the development of non-default TPH cleanup goals. Summary tables of KERAMIDA's experience with petroleum remediation within the last two years are provided in Attachment 5. Separate summary tables are provided for the remedial approaches identified in the PRGI RFQ. As illustrated in the summary tables, projects have been completed in all seven of the PRGI Administrative Regions.

3(b) Number of Indiana Site Closures within the Last Three (3) Years

KERAMIDA has obtained regulatory closure or met remedial objectives for 66 sites within the last three years in Indiana of these, 48 of the projects were regulatory closures and 18 were private actions. Regulatory closure was obtained under a variety of programs of interest to the

State including LUST, VRP, Brownfields, and State Cleanup. A summary table listing the Indiana Site Closures within the last three years is provided in Attachment 6. As can be seen in the summary table, the sites are located in all seven of the PRGI Administrative Regions.

3(c) Experience with Fixed-Price Remediation Contracts

KERAMIDA has significant experience with fixed-price remediation contracts. Examples include PRGI funded projects in South Bend and West Lafayette, Indiana, a cleanup for Pfizer in Terre Haute, Indiana, and a large scale multi-million dollar Superfund cleanup at the Continental Steel site in Kokomo, Indiana. KERAMIDA has successfully completed the remediation projects in a timely manner. A letter of commendation from Pfizer is included in Attachment 7. Work at the Continental Steel site is on-going.

4.0 GEOGRAPHIC COVERAGE AREA

KERAMIDA has the ability to work in and extensive experience within all seven of the PRGI Administrative Regions. Based on a careful evaluation of the information below, KERAMIDA has determined its order of preference with regard to the Regions to be:

1) Region 4
2) Region 5
3) Region 3
4) Region 2
5) Region 1
6) Region 7
7) Region 6

As stated above, KERAMIDA has completed projects in all seven of the PRGI Administrative Regions. The preferences selected are based upon our long-term relationships with communities within the regions and the extensive experience in those areas.

KERAMIDA's experience with the City of Indianapolis, LISC, and local CDCs within PRGI Administrative Region 4 is extensive. We have completed brownfield projects for the city all throughout the county. We have also completed numerous projects in Hancock and Hendricks Counties. A listing of projects completed in Region 4 within the last three years is provided in Attachment 5. Our familiarity with this region is the reason this has been selected as the first choice.

PRGI Administrative Region 5 encompasses Madison, Grant, Howard, Henry and Wayne Counties. KERAMIDA has completed numerous projects in Anderson, Madison County. Most recently we have been involved with the Prime Battery Site for the City of Anderson and multiple projects for GM located in Anderson. KERAMIDA is currently assisting Grant County in the completion of the USEPA Community Wide Brownfield Grant Application due December 2006. Through partnering on this effort we have become familiar with Grant County. Currently, we are under contract, with IDEM, for the construction of the remediation of the Continental

Steel project located in Kokomo. This project is funded by the Superfund program and will be completed within the next two years. Through the use of innovative technology the site will go from a blight upon the community to a recreational area.

Within Region 5 is Henry County. KERAMIDA has completed a number of due diligence projects for the New Castle-Henry County Economic Development Corporation. We have also completed an application for a USEPA Community Wide Brownfield Grant and are currently working with them to identify potential projects that could compete for a Stipulated Assessment Grant through the IFA Brownfields Program.

KERAMIDA completed a major brownfield cleanup of the former Swayne Robinson foundry located in Wayne County. In August 2002, the Wayne County Commissioners received a Comfort Letter from the IDEM Brownfields Program. A summary of recently completed remediation projects in Region 5 is provided in Attachment 5.

Region 3 includes Tippecanoe County where KERAMIDA has worked closely with the City of West Lafayette. During the 2006 Brownfields Conference in Boston, representatives of KERAMIDA and Mayor Jan Mills of West Lafayette will present the success story of Wabash Landing. What was once a blight and slum upon the community has become a vibrant destination. With a hotel, retail, apartments, and restaurants Wabash Landing serves as one of the main gateways into the community. Through the creative use of multiple sources of funding former brownfield areas are now redeveloped. The community has invested over $12,000,000 and developers have invested over $53,000,000. Through the long term strategic planning of the community this valuable resource has been created. KERAMIDA has served as the environmental consultant throughout the revitalization process. Our efforts have included tank removals, environmental assessments and remediation. A summary of recently completed remediation projects in Region 3 is provided in Attachment 5.

Region 2 is located between our headquarters and KERAMIDA's Cincinnati office. This proximity has created numerous opportunities for work in the region. A summary of recently completed remediation projects in Region 2 is provided in Attachment 5.

Located in the region is Scottsburg, Scott County. In April 2000 KERAMIDA began working with the City of Scottsburg at the former Scott Manufacturing Facility. For the past six years, KERAMIDA has investigated the contamination of the volatile organic compounds and petroleum in the soil and groundwater at the site. From these investigations, KERAMIDA was able to determine the source area and magnitude of the contamination. KERAMIDA has assisted the City of Scottsburg in obtaining federal and state grants for remediation and helped the City of Scottsburg enter the Site into the Indiana Brownfields Program and Volunteer Remediation Program (VRP). KERAMIDA has performed remediation pilot tests at the Site to select the most economic alternative for the funding available. After the alternative was selected, KERAMIDA designed a treatment system and prepared bid specifications. KERAMIDA has assisted the City of Scottsburg in procurement of a firm to construct and install the treatment system. Throughout the investigations, fund procurement, pilot testing, and design phases, KERAMIDA has worked closely with Mayor Bill Graham, River Hills EDD and RPC, Bill

Saegesser, and Jason Combs at the Scottsburg Wastewater Treatment Plant to make this project successful.

5.0 CLIENT REFERENCES

KERAMIDA's list of references is as follows:

City of Indianapolis
Chris Harrell
Brownfields Redevelopment Program
City-County Building Room, 2042
Indianapolis, Indiana 46204-3828
(317) 327-5845

Development Concepts Inc./Martindale-Brightwood LLC
Mike Higbee
200 South Meridian Street, Suite 410
Indianapolis, IN 46225
(317) 262-9349

City of West Lafayette
Jesse Andrew III (Josh)
609 West Navajo Street
West Lafayette, IN 47906
(765) 775-5160

Katherine L. Shelby
Bingham McHale, LLP
2700 Market Tower
10 West Market Street
Indianapolis, IN 46204
(317) 968-5408

Mayor William Graham
City of Scottsburg
2 East McClain Avenue
Scottsburg, IN 47170
(812) 752-3169

ATTACHMENT 1

STATE OF INDIANA

JOSEPH E. KERNAN, Governor

Department of Administration

MINORITY AND WOMEN'S BUSINESS ENTERPRISES DIVISION
Indiana Government Center South
402 West Washington Street, Room W469
Indianapolis, Indiana 46204-2297
Telephone: (317) 232-3061

August 9, 2004

Vasilki Keramida
Keramida Environmental, Inc.
330 North College Avenue
Indianapolis, IN 46202

SUBJECT: Certification for the Disadvantaged/Women Business Enterprise Program

Dear Ms. Keramida:

The Indiana Department of Administration (IDOA), Minority and Women's Business Enterprises Division thanks you for submitting an application for certification as a Disadvantaged/Women Business Enterprise (D/WBE).

We are pleased to inform you that **Keramida Environmental, Inc.** is hereby certified as a Women Business Enterprise (WBE), in accordance with the information submitted and reviewed. This determination is based on information provided to IDOA that indicates your firm provides a commercially useful function in the area(s) of

Business Service - NAICS Codes 541330, 562910 – Enviromental Engineering Consultant (Engineering, Consulting & Remediation)

Keramida Environmental, Inc. is hereby certified as a Disadvantaged Business Enterprise (DBE), in the area of

Business Service- NAICS Code 562910- Remediation

This certification is valid through **August 31, 2007,** inclusive. While the certification is valid for a three-year period, we will request annual updates regarding those issues critical to maintaining your certification.

If the firm should develop the resources, including equipment and personnel, to become involved in other areas and wishes to be certified in those areas, you must notify this office for a determination which may require additional documentation. If the firm no longer has the ability to perform in certain areas or loses its pre-qualification status in certain areas, IDOA must be notified of those changes within seven days of the firm's notification of the same. Failure to do so may result in your firm being removed from eligibility.

Also, location and/or telephone changes, changes in the ownership and/or managerial/operational control of the business shall be reported to IDOA within seven days of the change. Failure to do so may result in your firm being removed from eligibility.

IDOA reserves the right to rescind this certification if any of the following are found to be true: 1) the above requirements are not met; 2) the information upon which the certification is based proves to be false, inaccurate or misleading; 3) other just cause is determined through established investigative procedures.

This certification is not necessarily accepted by other states or agencies and does not validate the capability or capacity of your firm to perform in the area(s) for which you have been certified.

Questions regarding this certification may be addressed to the Indiana Department of Administration, Minority and Women's Business Enterprise Division, at 317/232-3061.

Sincerely,

Ronalda R. Minnis
Deputy Commissioner
Indiana Department of Administration
Minority and Women's Business Enterprises Division

RRM: dc
cc: INDOT Supportive Services
File

ATTACHMENT 2

KERAMIDA

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ANDREW A. GREMOS, L.P.G., CHMM
SENIOR VICE PRESIDENT OF LAND SERVICES
Exp.: 17 yrs.

Mr. Gremos is the Senior Vice President of Land Services at KERAMIDA Environmental, Inc. His responsibilities include the management and mentorship of his Division's staff, and the stewardship for a variety of site investigation and remediation projects, as well as expert testimony. Mr. Gremos, prior to joining KERAMIDA in 1997, was in charge of the Fluor Daniel GTI (formerly Groundwater Technology) operations for Indiana as Operations Manager/Office Manager for that company. He also provided expertise to that company's projects throughout the midwest. His work over the last 17 years has focused on investigations and remediation of multiple-contaminant properties, including contaminant fate and transport, groundwater modeling, soil vapor intrusion modeling, and advanced remedial processes. He has worked on hundreds of sites, ranging from single gas stations to complex terminals, public utility sites, and industrial facilities, where he completed comprehensive investigations, fate and transport modeling, corrective action plans, and design and implementation of remedial actions under various regulatory programs including VRP, LUST, CERCLA, RCRA and Brownfields. Mr. Gremos' experience includes the successful completion of a large, EPA Region V Time-Critical Removal Action project, where he served as Site Manager. He has received numerous awards, including an award from a major oil company for the development of an innovative remedial design. Mr. Gremos has provided expert services for numerous cases involving appropriateness of investigation, selected remedy and design, time of completion, and impact of remediation on land use.

Mr. Gremos holds B.S. and M.S. degrees in Geology from Indiana University and Old Dominion University and is a Professional Geologist in five states and a Certified Hazardous Materials Manager. Mr. Gremos has lectured extensively on investigation and remediation topics, including presentations on the Risk Integrated System for Closures (RISC). Mr. Gremos is a member of the KERAMIDA Litigation Experts Group.

EDUCATION

M.S., Geology, Old Dominion University, 1992, Phi Kappa Phi Honor Society
B.S., Geology, Indiana University, 1986, Sigma Gamma Epsilon Honor Society

CERTIFICATIONS AND REGISTRATIONS

California Registered Geologist, #7167
Indiana Licensed Professional Geologist, #1704
Kentucky Registered Geologist, KY 2277
Virginia Professional Geologist, 2801 001451
Tennessee Registered Professional Geologist, #4583
Arkansas Professional Geologist, #1825

Certified Hazardous Materials Manager, #7452
OSHA 40-hour Training in Accordance with OSHA 29 CFR 1910.120
OSHA 8-hour Supervisor Training

REPRESENTATIVE PROJECT EXPERIENCE

Insurance Claim Mitigation Services

Determine regulatory and technical status of investigation and remediation projects on behalf of insurance carriers where a damage claim has been made. Typical services include an evaluation of past and proposed activities and allocated costs, oversight of insured consultants, and expert testimony.

Brownfield Redevelopment Services

Manage many brownfield redevelopment projects for municipalities and other significant stakeholders. Helped communities obtain financial assistance from local, state, and federal programs as well as private sources. Assist stakeholders determine and obtain proper tools to mitigate actual and perceived environmental liability (e.g., closure letters).

Other Remediation and Investigation Projects

- **Natural Attenuation Remediation**
  Managed remediation of dissolved petroleum hydrocarbon and chlorinated solvents plumes via natural attenuation in numerous sites, including the collection of data to support natural attenuation progress, and the use of data in fate and transport model to demonstrate plume stability.

- **Former Carburetor and Brake Remanufacturer**
  Managed investigation and remediation of chlorinated organics and metals at former carburetor and brake remanufacturing facility. Investigation activities included geophysical surveys and extensive on-site and off-site subsurface exploration. Extensive excavation and removal of buried drums and debris was performed. Selected remedies for the residual organics in soil and groundwater included air sparging, soil vapor extraction and phytoremediation. Metals occurrence was managed through buried drum and debris removal and an exposure-prevention cap. Off-site remediation was accomplished using a reductive dechlorination technology. The project is regulated under the Voluntary Remediation Program.

- **Remediation of Soil and Groundwater**
  Developed remedial design and managed the installation of the remediation system at numerous petroleum contaminated sites. The systems included soil vapor extraction and air sparging components. Several sites have already met their cleanup goals and have achieved the designated completion stage.

- **Remediation of Soil and Groundwater at Chemical Facility**
  The remediation consists of dual-phase vapor extraction and involves the cleanup of soils and groundwater at an entire chemical facility heavily contaminated with chlorinated and petroleum organics.

- **Investigation and Remediation of Soils and Groundwater at a Steel Mill**
  The project addresses the investigation and remediation of organics, metals and inorganics in surface and subsurface soils and groundwater and incorporates plume stability, phytoremediation and risk assessment components into the remedy. The project is under the Indiana Voluntary Remediation Program.

- **Remediation of PCBs – Contaminated Soils**
  The project involves the removal and disposal of large volumes of soil contaminated with PCBs, and confirmation of the removal actions.

- **Fan/Blower Manufacturing Plan Assessment**
  Managed the subsurface investigation and remedial design and installation for chlorinated hydrocarbon occurrence at a fan and blower manufacturing plant. The remedy included high vacuum, dual phase extraction. The project was under the Indiana Voluntary Remediation Program.

- **Time Critical Removal Action**
  Managed the site activities for the development and implementation of an EPA Region V Time-Critical Removal Action for a special waste in a residential area adjacent to a refinery. Activities completed included a geophysical survey and delineation assessment, excavation and disposal of the special waste, and confirmation sampling/documentation.

- **Corrective Action Plans/Remediation**
  Managed investigations, conducted groundwater flow modeling, and developed remedial designs for many petroleum and chlorinated hydrocarbon impacted sites in various hydrogeologic settings and under different regulatory programs, including LUST and VRP.

- **Quantitative Risk Assessments**
  Determined exposure pathways, conducted contaminant fate and transport modeling, and managed quantitative risk assessments for petroleum retail, manufacturing, and public utility sites in various exposure settings.

- **Retail Petroleum Facilities**
  Conducted assessments to determine soil and groundwater quality, aquifer characteristics, and the presence of potential receptors for many sites in various hydrogeologic settings.

- **Phase I/Phase II ESAs**
  Managed hundreds of Phase I and Phase II Environmental Site Assessment for diverse properties throughout the United States such as former petroleum/solvent bulk storage facilities, former railyards, former fuel and coal supply facilities, dry cleaners, service stations, active industrial sites, and Brownfields.

- **Electric Motors Manufacturing Plant Assessment**
  Managed the subsurface investigation of xylene and PCBs at a former small motors manufacturing plant.

- **Dry Cleaner Facility Assessments**
  Conducted assessments to determine potential source areas of tetrachloroethene (PCE), soil and groundwater quality, and the presence of potential receptors to PCE at various sites.

- **Electronics Manufacturing Plant Assessment**
  Managed the subsurface assessment of a former dump site at an electronics manufacturing plant.

- **Expert Testimony**
  Provided opinions regarding completeness of site investigation, appropriateness of selected remedial technology, time to closure, and effect of remediation on land use.

PRESENTATIONS

"Lofts Condos, Planned Communities and More: Residential Redevelopment on Brownfields", Andrew Gremos, Sr. Vice President, Land Services, KERAMIDA Environmental, Inc., Patrick King, GEI Consultants, Inc., John Coyne, Urban Redevelopment Authority of Pittsburgh and The Honorable Jan Mills, City of West Lafayette, National Brownfields Association 2006 Brownfields Conference, Boston , MA. November 2006.

"Brownfields: Hot Topic - Cool Solutions", Andrew Gremos, Sr. Vice President, Land Services, KERAMIDA Environmental, Inc. and Matt Wagner, Sales Manager, Ohio Operations, KERAMIDA Environmental, Inc., National Brownfields Association 2006 Brownfields Conference, Boston , MA. November 2006.

"Effects of the Proposed TCE Cancer Slope Factors on Vapor Intrusion Evaluations at Urban Sites in Indiana.", Andrew Gremos, Sr. Vice President, Land Services, KERAMIDA Environmental, Inc. and Chris Haviland, Senior Toxicologist, KERAMIDA Environmental, Inc., Midwestern States Risk Assessment Symposium, Indianapolis, IN, August 2006.

"IDEM RISC Policy and Brownfields", Andrew Gremos, L.P.G., C.H.M.M., Sr. Vice President, Land Services, KERAMIDA Environmental, Inc., Bill Hayes, Indiana Department of Environmental Management (IDEM), Bob Moran, Indiana Department of Environmental Management (IDEM), Indiana Brownfields Conference 2006: Bridging Economic Development and Environmental Protection, Indianapolis, IN, April 2006.

"A Day in the Life of an Environmental Consultant in the Field", Andrew Gremos, L.P.G., C.H.M.M., Sr. Vice President, KERAMIDA Environmental, Inc., Konrad Banaszak, Ph.D, L.P.G., Sr. Vice President, KERAMIDA Environmental, Inc. and Jason Juliano, Field Technician, KERAMIDA Environmental, Inc., Ohio State Bar Association's 21st Annual Ohio Environmental Law Seminar, Mt. Sterling, OH, April 2006.

"RISC Update: Overhaul of RISC Guidance Manuals and IDEM's New TPH Policy." Andrew Gremos, David R. Gillay, Barnes & Thornburg, Bill Hayes, IDEM, Bruce Ortel, IDEM, Forum on Environmental Issues Sponsored by Barnes & Thornburg and KERAMIDA Environmental, Inc., May 5, 2005, Indianapolis, Indiana.

"Chemical Oxidation Using Fenton's Reagent: Lessons Learned." Proceedings of HELECO '05 Conference, Athens, Greece, February 2005.

"Negative Indicators in Fenton's Application Give Insight Into the Process." Remediation of Chlorinated and Recalcitrant Compounds – Fourth International Conference, Monterey, California, May 24-27, 2004.

Co-Speaker with Robert White of Concurrent Technologies Corporation, "Advanced Oxidation in Casting Emissions Reduction Program: Underwater Plasma: A New Remediation Technology for MTBE and BTEX." 2001 International Containment & Remediation Technology Conference and Exhibition, June 10-13, Orlando, Florida

CONTINUING EDUCATION

NWWA Course, 1988, DRASTIC: A Standardized System for Evaluating Groundwater Pollution Potential Using Hydrogeologic Settings
NWWA Course, 1990, IBM Applications in Groundwater Pollution and Hydrology
NGWA Course, 1992, Principles of Subsurface Contaminant Fate and Transport Modeling
ODI Course, 1992, Quality Action Teams
AMA Course, 1993, Improving Managerial Skills
NGWA Course, 1998, PC Applications in Risk Assessment, Remediation, Modeling, and GIS
Battelle Conference, 2000, Remediation of Chlorinated and Recalcitrant Compounds
Battelle Conference, 2001, In-Situ and On-Situ Bioremediation
Battelle Conference, 2002, Remediation of Chlorinated and Recalcitrant Compounds
Battelle Short Course, 2002, Bioremediation System Design Using Visual MODFLOW and RT3D
Battelle Conference, 2003, In-Situ and On-Situ Bioremediation
Battelle Conference, 2004, Remediation of Chlorinated and Recalcitrant Compounds
In Situ Oxidation (ISCO) Short Course, 2002, 3rd International Conference on Remediation of Chlorinated and Recalcitrant Compounds

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ANN D. LUTHER, P.E.
BROWNFIELDS & CONSTRUCTION MANAGEMENT COORDINATOR
Exp: 25 yrs.

Ms. Luther has a BS in Civil Engineering from Purdue University and a Master of Arts from Webster University. She is a Registered Professional Engineer. Ms. Luther has over 20 years experience in the construction industry, including managing design and construction projects from design concept to building turnover. Her experience includes managing sub-contractors, preparing bidding packages, negotiating contracts and modifications, developing scope of works, preparing contracts and specifications and acting as an owner's representative.

Ms. Luther's experience includes managing USEPA clean-up projects to ensure they were conducted in accordance with the consent decrees and the remediation plans and specifications. She also has experience managing asbestos removal and abatement projects and lead based paint removal projects.

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FRANK D. WEST, L.P.G., C.H.M.M.
SENIOR GEOLOGIST, INVESTIGATION & REMEDIATION SERVICES
Exp: 16 yrs.

Mr. West has over 16 years of experience in environmental geology/hydrogeology and has managed a wide variety of investigation and remediation projects involving contaminated soils and groundwater. His experience covers various regulatory programs including Superfund, Voluntary Remediation, RCRA, LUST and Brownfields. He is a licensed professional geologist holds a B.S. in geology from Ball State University and has completed graduate studies in geology/geophysics at the University of Akron.

EXPERTISE

Remediation
Design/Construction
Site Investigation
CERCLA/RCRA
UST Management/Closure
VRP Management/Closure

EDUCATION

BS, Geology, Ball State University, 1987
Graduate studies in geology/geophysics, University of Akron

CERTIFICATIONS AND REGISTRATIONS

Licensed Professional Geologist No. 2083
C.H.M.M. - Master Level, CHMM #7658
OSHA 29 CFR 1910.120 40-Hour Safety Training
OSHA 8-Hour Refresher for Hazardous Waste Activities (Annual)
OSHA 8-Hour Management/Supervisory Training
Hazardous Materials Management Certification Review, University of Cincinnati, June 1996

REPRESENTATIVE PROJECT EXPERIENCE

- **Assistant Coordinator, CERCLA RD/RA**
  Provides oversight and project coordination for the Tippecanoe Landfill Superfund site RD/RA. His duties include the oversight of all field activities related to the remedial design and construction of the cap, leachate collection system, methane collection system, and

groundwater monitoring system. The groundwater monitoring system is designed to evaluate the impact of the cap and leachate/methane collection systems on groundwater and monitor the natural attenuation capacity of the groundwater in order to demonstrate that active groundwater remediation will not be required.

- **Project Manager, CERCLA RD/RA**
  Project manager for northern Indiana Superfund site. Has managed the project through both RI/FS and RD/RA development and implementation. Site has involved numerous subsurface investigations, treatability studies, design of a 3,000 gpm groundwater extraction/treatment system, and design and construction of a municipal water system expansion to supply potable water to over 1,000 residences and businesses. The project involved extensive community relations including public meetings and a residential well monitoring program as well as coordination with city officials.

- **Project Manager, Hazardous Waste Management**
  The project was conducted as part of an industrial transaction sale for a worldwide pharmaceutical company, and included excavation and disposal of over 1,700 yards of hazardous waste-classified soil. Developed work plan for on-site treatment of soils to reduce concentrations below universal treatment standards in compliance with RCRA generator treatment standards. Treatment involved soil mixing with calcium oxide to create an exothermic reaction to burn-off volatile constituents. Reduced total project cost by two-thirds vs. proposed incineration technology. Involved extensive negotiations with state agency to allow for on-site treatment in modified containers. Required design and construction of an off-gas treatment system to collect hazardous constituents released during treatment.

- **Project Geologist, Coal Tar River Sediment Removal**
  The project was conducted under the Indiana Voluntary Remediation Program. Coordinated various regulatory and permitting issues and provided field oversight for the removal of 1,200 tons of coal tar impacted river sediments. The project involved installation of silt curtains to mitigate downstream migration of impacted sediments. Sediments were segregated, stabilized, and transported to subtitle D landfill.

- **Project Geologist, Coal Tar Removal and Treatment**
  The project was conducted under the Indiana Voluntary Remediation Program. Prepared the Remediation Work Plan and supporting documents and coordinated various regulatory and permitting issues for the removal and treatment of roughly 30,000 tons of coal tar impacted media. Media was segregated as hazardous/non-hazardous to reduce disposal costs. Hazardous media was treated with calcium oxide and coal to render it non-hazardous and co-burned at a power generation facility.

- **Compliance Management, Multi-Site Transportation Facility**
  Conducted site compliance audits and prepared various pollution prevention plans including OPA-90 Facility Response Plans, SPCC Plans, RCRA Contingency Plans, and storm water pollution prevention plans. Prepared "One Plan" documents which combined emergency response and contingency planning requirements from numerous overlapping regulatory

requirements into "One Plan" that provided a cost effective and user friendly tool for facility managers and emergency response personnel.

- **Field Manager, CERCLA Removal Action Assessment**
  Field Manager for multi-phase assessment for removal action which included geophysical surveys, excavation of test pits in a level B environment to delineate source areas, assessment of facility sewer system to delineate PCB and xylene impacts, and investigation and remediation of facility floor impacted with PCBs.

- **Project Manager, UST Closure Sites**
  Managed removal of USTs, collection of soil and groundwater samples, and prepared reports per regulatory guidelines for many UST sites.

- **Project Geologist, Diesel Engine Manufacturing Plant Assessment**
  Conducted and analyzed 72-hour aquifer pumping test and soil vapor survey to assess aquifer characteristics and locate contaminant source areas. Data used to develop corrective action plan and to design and construct groundwater pump and treat system to remediate chlorinated solvents.

- **Environmental Equipment**
  Experienced with the installation and maintenance of environmental equipment including: air stripping towers, soil vent systems, dual-phase systems, oil/water separators, filter scavengers, dual pump recovery systems, carbon treatment systems, and recovery well installations.

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ANDREW W. S. SARGENT
PROJECT MANAGER
Exp.: 16 yrs.

Mr. Sargent has 16 years of experience in the environmental field and holds a B.S. degree in Geology from the University of Dayton. He has extensive experience in analytical methods, field sampling methods, and review of laboratory quality control reports. Mr. Sargent holds the position of Project Manager at KERAMIDA, and has managed projects in accordance with a variety of regulatory programs, including LUST, VRP, Brownfields, RCRA, NPDES and RISC. Mr. Sargent also has experience in Phase I and II Environmental Site Investigations.

Mr. Sargent has managed remediation systems including soil vapor extraction, air sparging, landfarming, and pump/treatment of groundwater through air stripping. In regard to asbestos, Mr. Sargent has managed a great number of asbestos inspection projects and oversight of asbestos abatement projects, and is a Certified Asbestos Inspector and Certified Asbestos Project Supervisor. Mr. Sargent also created a customized asbestos management database in Microsoft Access for a national firm with over 250 locations. This database allows the firm to order asbestos inspections and check on status of each project through the Internet. Mr. Sargent is a member of the Professional Geologists of Indiana and the National Ground Water Association.

EXPERTISE

Initial Site Characterizations
Phase I Environmental Site Assessments
Phase II Environmental Site Assessments
Asbestos Inspection
Groundwater Monitoring
Review and Verify Analytical Data
Groundwater and Soil Investigations/Remediation
Corrective Action Plans
Design and Implementation of Electronic Databases

EDUCATION

B.S., Geology, University of Dayton, 1989

CERTIFICATIONS AND REGISTRATIONS

OSHA 40-Hour Health and Safety Training
Kentucky Asbestos Inspector
Advance Identification of Asbestos
Sampling and Evaluation Airborne Asbestos Dust
Indiana Asbestos Supervisor
Indiana Asbestos Building Inspector

PROFESSIONAL EXPERIENCE

Phase I Environmental Site Assessments including interviews with owner and local official, historical and environmental record searches, review of wastestreams and disposal records and site visits to identify potential environmental concerns.

Phase II Environmental Site Investigations including sampling of soil and groundwater using push-probe technology and conventional drill rigs, installation of monitoring wells, soils characterization, analytical data review and report preparation.

Leaking Underground Storage Tank (LUST) projects including the removal of underground storage tanks, initial site characterizations, corrective action plans and remediation. Remediation of the site using soil excavation/disposal, land farming, air sparging and soil vapor extraction. Related projects include the removal and investigation of oil/water separators and hydraulic lifts.

Brownfield project of remediation of a former gas station/dry cleaner site for the construction of a new fire station.

Voluntary Remediation Program (VRP) experience including meetings with the agency, preparation of the application, soil and groundwater investigation and sample splitting with the agency.

Resource conservation Recovery Act (RCRA) projects including the closure of hazardous waste storage pad, closure of hazardous chemical above ground storage tanks, and the identification and sampling of hazardous and non-hazardous wastestreams.

National Pollution Discharge Elimination Systems (NPDES) projects including sampling and analysis plans for wastewater and stormwater permits, collection of samples with automatic samplers, chemical tracer flow studies and flow studies using transducer, bubble, and ultrasonic flow meters.

Computer database design using Microsoft Access, and also web page design. One project example was the development of an asbestos management database for a national firm with over two hundred and sixty (260) locations across the United states. This database was integrated with internet web pages designed to allow the firm to submit work orders and check status twenty-four (24) hours a day, seven (7) days a week.

PROFESSIONAL TRAINING

Asbestos Project Supervisor Course (annual)
Asbestos Inspector Course (annual)
Sampling and Evaluation of Airborne Asbestos Dust, NIOSH Course #582
Advanced Asbestos Identification, McCrone Research Institute
Project Management Course, IUPUI
Beginning Access 97 Course, New Horizons Computer Learning Center
Intermediate Access 97 Course, New Horizons Computer Learning Center
Advance Access 97 Course, New Horizons Computer Learning Center
Web Page Development Course, CompuMaster
Risk Integrated System of Closure (RISC) Training, Indiana Department of Environmental Management
Ohio BUSTR Training, Ohio Division of State Fire Marshal

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BRIAN HARRINGTON
VICE PRESIDENT, FIELD OPERATIONS
Exp.: 13 yrs.

Mr. Harrington has managed and performed field activities in hundreds of projects involving hazardous waste removals, site investigations, remediations, UST management, asbestos inspections, asbestos abatement oversight, site assessments and industrial air inspections.

Mr. Harrington received a B.S. in Environmental Health and Sciences from Indiana State University and has been with KERAMIDA for over 14 years. He holds the following certifications: Health and Safety Training - OSHA 29 CFR Part 1910 and 1926; Asbestos Inspection; Confined Space Entry; State Fire Marshal's Office to supervise, manage and direct the installation, testing, retrofitting, removal or closure of USTs; Federal Method 303 Coke Oven Inspection; and, Federal Method 9 Visible Emission Evaluation.

EMPLOYMENT HISTORY

2006 – Present	Vice President, Field Operations KERAMIDA Environmnetal, Inc.
2002 – 2006	Manager, Field Operations KERAMIDA Environmental, Inc.
2000 - 2002	Project Manager KERAMIDA Environmental, Inc.
1993 - 2000	Project Scientist KERAMIDA Environmental, Inc.

EDUCATION

B.S. in Environmental Health, Indiana State University

EXPERTISE

Site Investigation/Remediation
Site Assessment
UST Management/Closure
Asbestos Management
Waste Management & Disposal
Method 303 Coke Oven Inspection
Method 9 Visible Emissions Inspections

Emissions Testing
Indoor Air Quality

CERTIFICATIONS

OSHA 40-hour HAZWOPER, 1989
OSHA 1910.120 8-hour Site Supervisor Training: Certificate No. 020502-80SUP-01
OSHA 1910.146 Confined Space Entry: Certificate No. 950037
Visible Emissions Evaluator: September 2002
Initial Asbestos Building Inspector: License No. 194016066

SPECIALIZED TRAINING

Corrosion Short Course
Geoprobe® Soil Probing Equipment and Tools

PROFESSIONAL EXPERIENCE

National Emission Standard for Hazardous Air Pollutants (NESHAPs) projects include U.S. Environmental Protection Agency (USEPA) Method 303 inspections and program management for services provided to the City of Indianapolis and State of Indiana at three coke plant facilities.

Phase I Environmental Site Assessments including interviews with owner and local official, historical and environmental record searches, review of wastestreams and disposal records and site visits to identify potential environmental concerns.

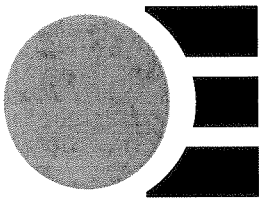
Phase II Environmental Site Investigations including sampling of soil and groundwater using push-probe technology and conventional drill rigs, installation of monitoring wells, soils characterization, analytical data review and report preparation for hundreds of sites.

Leaking Underground Storage Tank (LUST) projects including the removal of underground storage tanks, initial site characterizations, corrective action plans and remediation. Remediation of the site using soil excavation/disposal, land farming, air sparging and soil vapor extraction. Related projects include the removal and investigation of oil/water separators and hydraulic lifts.

Brownfield project of investigation of a former industrial facility for the purpose of redevelopment as an art school and apartments.

Voluntary Remediation Program (VRP) experience including meetings with the agency, preparation of the application, soil and groundwater investigation and sample splitting with the agency.

Resource conservation Recovery Act (RCRA) projects including the closure of hazardous waste storage areas and the identification and sampling of hazardous and non-hazardous wastestreams.



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KONRAD BANASZAK, Ph.D., L.P.G.
SENIOR VICE PRESIDENT
Exp.: 30 yrs.

Dr. Banaszak has over 30 years of experience in hydrogeology, geochemistry and investigations of contaminated properties and holds a B.S. in Geology from Beloit College and M.S. in Geology and Ph.D. in Geochemistry degrees from Northwestern University. He is a nationally recognized leader in investigations of complex contaminated sites and he is sought after for expert testimony in litigation involving contaminated properties. Prior to joining KERAMIDA he worked in leadership positions at ARCADIS Geraghty & Miller from 1988 to 2003. While at ARCADIS he was the Corporate Director for Investigations Business Practice, having charge of that $30M annual business practice, and a member of the ARCADIS Senior Experts Group.

Dr. Banaszak lectures widely to industry groups. His over 30 years of experience includes water quality issues (surface and ground), metals chemistry (including complexation and chelation), contaminant fate and transport, hydrogeology, cost allocation, remediation chemistry, and the impacts of large scale development on water resources.

Dr. Banaszak has key experience in the areas of environmental drainage, watershed issues, and stream studies. He began studying these issues as an Assistant Professor at the University of Mississippi and has continued to the present. From a study of a small watershed in Mississippi to the study of major river systems, like the West fork of the White, the Grand Calumet, and the Patoka and the wet lands in the Indiana Dunes National Lakeshore while with the Federal Government, Dr. Banaszak has been working out the behavior of stream systems with respect to flow quantity and the quality of the surface water. While at the U.S. Geological Survey, these studies were undertaken under his direction as Chief of the Hydrologic Investigations Section. In private consulting, the study of river and stream systems have been undertaken for clients concerned with their impacts on such systems. Most of those studies have been concerned with PCBs, metals, and contaminated sediments. The understanding of stream flow, water quality, sediment movement, and sediment quality and their proper measurement are critical knowledge with which Dr. Banaszak has broad experience. Because of that experience, Dr. Banaszak is able to select the most cost effective and scientifically valid ways to truly understand surface water systems.

Prior to his tenure with ARCADIS Geraghty & Miller, Dr. Banaszak worked for the USGS-Indiana District where for six years he served as the Chief of the Hydrologic Investigations Section. In that capacity, he was responsible for all aspects of his agency's water resources research (surface and groundwater) and supervised a staff of 50 professionals. He also worked with other federal agencies as a reviewer of environmental documents/project work product for which he received a Special Achievement Award. Dr. Banaszak's experience, furthermore, includes work with the Office of Surface Mining as the Principal Hydrogeologist and Water Quality Expert for Region III, where he won his first Special Achievement Award. He taught at Indiana University Purdue University at Indianapolis where he is an adjunct associate professor

and the University of Mississippi where he was selected as the Outstanding Teacher of the Year in the School of Engineering in 1975. He holds national certifications and licenses as a Professional Geologist and Hydrogeologist, as well as state certifications from Indiana, Illinois, Kentucky and Wisconsin. He is a fellow in the Indiana Academy of Science. He is a member of the KERAMIDA Litigation Experts Group.

AREAS OF EXPERTISE

Hydrogeology/Geology
Geochemistry
Site Investigations
Remediation
Modeling
Risk Assessment
Brownfields
CERCLA/RCRA

EDUCATION

B.S. Geology, Beloit College, 1966
M.S. Geology, Northwestern University, 1969
Ph.D. Geochemistry, Northwestern University, 1975

CERTIFICATIONS AND REGISTRATIONS

Illinois Licensed Professional Geologist (#196-000436)
Indiana Certified Professional Geologist (#16)
Kentucky Certified Professional Geologist (#835)
Wisconsin Certified Professional Geologist (#446)
Certified Professional Hydrogeologist (AIH-#163)
Certified Professional Geologist (AIPG #3981)

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science
American Geophysical Union
American Institute of Hydrology
American Institute of Professional Geologists
American Water Resources Association
Geological Society of America
Geochemical Society
Indiana Academy of Sciences, Fellow
Indiana Geologists
Indiana Water Resources Association

REPRESENTATIVE MAJOR ACTIVE PROJECTS

- Representing Ames Industries in the Downer's Grove (Ellsworth), Illinois, Superfund Actions. This large and complex issue involves chlorinated solvents, other contaminants, and public and private water supplies in glacial deposits. Dr. Banaszak has been retained to advise on investigation results, the harm which may have been caused, and the most likely remedial alternatives.

- Main hydrogeological expert with TRW in Sullivan, Missouri, providing fate and transport analysis in a karst terrain. Have lead the investigation into quantifying the relationships in the difficult setting. Dr. Banaszak's role is to advise on investigation methods and results, modify monitoring to be scientifically sound but cost effective, and to understand the most likely remedial alternatives, all within the context of RCRA.

- Providing expert advice on matters related to water quantity and quality to the owner and the contracted operator of the Indianapolis City water supply. The work contains aspects of both ground and surface water and balancing the supply with respect to the quality and quantity of the water available. Major focus of the work to date has been surface water intakes and new ground water development.

- Advising an aggregate producer on the alternatives to reduce the overall amount of water pumped from an operation. The work involves calculating a pay back time relative to reductions in total pumpage achieved by various hypothetical actions. Two alternatives were provided, but KERAMIDA discovered another alternative while doing the work that has the quickest pay back.

REPRESENTATIVE PAST PROJECT EXPERIENCE

- Lead consultant on a pesticide/herbicide contaminated Superfund site in the southeast.
- Lead consultant on a RCRA RFI/CMS for a large nonferrous metals refining and recycling plant.
- Lead and advising consultant on two RCRA RFI/CMS for two fully integrated steel mills in the Midwest.
- Lead and advising consultant for a self-implementing PCB cleanup under the "Mega Rule."
- Source identification and allocation of PCBs in a stream in the Midwest.
- Lead hydrogeologist in the development of an Institutional Control Area alternative for several Superfund subsites.
- Lead hydrogeologist and geochemist (including radionuclides and stable isotopes) for site-wide study of Argonne National Laboratories, IL.
- Groundwater flow expert for the brownfield redevelopment of a Chrysler automotive assembly plant in Detroit, MI.
- River Bank Infiltration (RBI) projects for Louisville Water Co. and the Indianapolis Water Co.

- Development of systems to predict behavior of chemicals spilled on or applied to soil - Major Agricultural Chemical Company.
- Review of Four County Landfill for the Agency for Toxic Substances and Disease Registry.
- Review of the EIS of the proposed CDF in Lake Michigan to hold sediments to be dredged from the Indiana Harbor Canal for EPA-V.
- Review of the REM/FIT of the North Main Street Well Field, Elkhart, Indiana, for EPA-V.
- Geochemical and loading allocation expert - Superfund action for a large watershed in New York.
- Advising geochemical consultant on mobility and treatment technologies for nuclear waste site in Washington.
- Geochemical and groundwater expert in cost recovery case for chlorinated solvents in "Silicon Valley", CA.
- Senior advisor for geochemistry of inorganic and organic contamination for a large landfill in the Los Angeles Metro Area.
- Senior advisor on environmental chemistry for a RCRA site where pesticides are manufactured in the Midwest.

Expert Witness/Expert Testimony

- Geochemical Expert in Superfund cost allocation case involving arsenic in Pennsylvania.
- Geochemical and isotope expert witness - landfill toxic tort in Texas.
- Expert witness on the probable character of dust in an asbestos case brought in San Francisco.
- Expert Witness for cost allocation for a chemical depot developed on an older coal tar refinery site in Illinois.
- Expert witness for degree-of-harm and cost recovery action in Federal Bankruptcy Action.
- Expert witness for cost recovery from insurer for major landfill operator at multiple sites.
- Expert witness for a large machinery manufacturer Illinois about potential contamination of domestic wells.
- Expert witness for manufacturer in the Los Angeles Basin, using a new "chemical finger printing" technique.
- Expert witness for a logger in California involved in a case of two fish kills and alleged sedimentation and water quality degradation of a river and two reservoirs.
- Outside expert for the state of North Carolina on geochemistry and hydrogeology for siting low-level radioactive waste facility.
- Geochemical expert on a cost allocation case concerning heavy metals in South Carolina.

SELECTED PUBLICATIONS

1980. Coals as aquifers in the Eastern United States: 1980 Symposium on Surface Mining Hydrology, Sedimentology, and Reclamation, University of Kentucky, Lexington, KY, p. 235-241.

1981. Predicted changes in the mineralogy of spoil as a function of net neutralization potential and rate of flushing: 1981 Symposium on Surface Mining Hydrology, Sedimentology, and Reclamation, University of Kentucky, Lexington, KY, p. 459-462.

1983. Drainage problems in Little Eagle Creek, Indianapolis and Speedway, Indiana: in Contribution to urban engineering geology of the Indianapolis area, Field trips in Midwestern Geology, v. 2, Geological Society of America, 1983 Meeting, Indianapolis, IN.

1985. Potential effects on groundwater of a hypothetical surface mine in Indiana: Groundwater Monitoring Review, v. 5, no. 1, p. 51-57.

Indiana - groundwater resources: in National Water Summary 1984, U.S. Geological Survey Water Supply Paper 2275, p. 205-210.

1988. Water quality in a thin water-table aquifer adjacent to Lake Michigan within a highly industrialized region of Indiana: in The Great Lakes: Living with North America's Inland Waters, D. M. Hickcox, ed., American Water Resources Association, Bethesda, MD, p. 247-258. (K. J. Banaszak and J. M. Fenelon).

1989. Preliminary analysis of the shallow groundwater system in the vicinity of the Grand Calumet River/Indiana Harbor Canal, northwestern Indiana: U.S. Geological Survey Open-File Report 88-492, 45p. (L. R. Watson, R. J. Shedlock, K. J. Banaszak, L. D. Arihood, and P.K. Doss).

Coal-Hydrology of Interior Province - Eastern Region: in Summary of U.S. Geological Survey and U.S. Bureau of Land Management National Coal-Hydrology Progress. Britton, L.J., and others, eds. U.S. Geological Survey Professional Paper 1464. p. 47-52.

1994. Glacial geology and groundwater flow in Northern and Central Indiana: in Proceedings of the Indiana Academy of Science, G.E. Dolph, ed., v. 98, p. 273-279.

1995. A brownfields success story - Chrysler's Jefferson North Assembly Plant in Detroit, MI in Remediation and Reuse. Indiana Department of Environmental Management. v. 1. Issue 7. p. 4-5.

2005. In-Situ Reductive Dechlorination of Solvents. Proceedings of the HELECO '05 Conference, Athens, Greece, February 2005.

2005. Communicating Science in Public Decision Making. Proceedings of the HELECO '05 Conference, Athens, Greece, February 2005.

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DOUGLAS B. ZABONICK, P.E.
SENIOR VICE PRESIDENT
Exp.: 23 yrs.

Mr. Zabonick holds a B.S. in Geological Engineering from Michigan Technological University and is a Registered Professional Engineer in the states of Indiana, Michigan and Ohio. His work over the past 23 years has included providing engineering expertise in the areas of site investigations, remediation design and installation, environmental assessments and waste audits, solid waste management, and landfills. Mr. Zabonick has performed due diligence on thousands of sites and has conducted investigations and remediation at hundreds of properties impacted by petroleum, solvents, metals and other compounds under various programs, including CERCLA, RCRA, UST, VRP and Brownfields. His experience also includes extensive work in the design as well as remediation of landfills. Mr. Zabonick's experience in resolving compliance and permitting issues concerning solid and hazardous waste. He has provided consulting and remediation services regarding mold issues to various clients, including attorneys, developers and large property management companies. Recent projects have included oversight of remediation activities at various shopping malls in the southeast, damaged by hurricanes in 2004 and 2005.

Mr. Zabonick has provided consulting services to hundreds of industrial, solid waste and petroleum industry clients, including remediation activities, waste compliance audits, development of waste management plans, asbestos and mold management plans, spill plans, corrective action plans, closure plans, and waste reuse and treatment. He has completed and managed over 2,500 Phase I & Phase II investigations and has field experience in groundwater, petroleum, soil and hazardous waste investigations and remediation. Mr. Zabonick is active in numerous professional organizations, including the American Foundry Society, Indiana Cast Metals Association, Solid Waste Association of North America and the Indiana Petroleum Marketers and Convenience Store Association where he serves as a member of the Codes and Standards Committee and IPCA representative to the Indiana RISC Advisory. Mr. Zabonick was the only consultant invited by IDEM to participate in the review of the final RISC Manual and is a qualified ISO 14000 Lead Auditor. Mr. Zabonick is a member of the KERAMIDA Litigation Experts Group.

EDUCATION

B.S., Geological Engineering, May 1983, Michigan Technological University

TECHNICAL EXPERTISE

Remediation Engineering
Site Investigation
Landfill Design
Waste Permits
Waste Treatment & Management
UST Management/Closure
Due Diligence

CERTIFICATIONS AND REGISTRATIONS

Professional Engineer Registered in Indiana, Michigan and Ohio
Member, National Water Well Association, AGSE
Member, Indiana Oil Marketers Association
OSHA 40-hour Training in Accordance with OSHA 29 CFR 1910.120
OSHA 8-hour Supervisor Training

REPRESENTATIVE PROJECT EXPERIENCE

- Conducted landfill closures and O&M activities for numerous landfills, including Superfund sites.

- Performed due diligence on thousands of sites and conducted investigations and remediation at hundreds of properties impacted by petroleum, solvents, metals, and other compounds under various programs, including CERCLA, RCRA, UST, VRP and Brownfields.

- Designed various remedial systems including soil vapor extraction (SVE), groundwater pump and treat (GPT) utilizing carbon and air stripping technology, multi-phase vapor extraction (MVPE) and bioremediation.

- Project manger for expansion of a Type I Restricted Waste Site used for the disposal of primarily salt cake, dross, baghouse dusts and refractory generated during the processing of aluminum. The site is an active landfill equipped with a synthetic liner, leachate collection and storage system, groundwater monitoring system and leachate pre-treatment system.

  Extensive work included design and permitting of landfill expansion, oversight of construction of new landfill cells, conducted groundwater monitoring and reporting, prepared corrective action plans for groundwater. Expansion of the landfill area increased the size of the available fill area from approximately 10 acres to 28 acres while increasing the height by approximately 60 feet. Prepared the engineering design, including the design of the final slopes, settlement calculations, erosion controls, leachate collection system and the final closure capping system. Also, providing comprehensive environmental services, including Spill Prevention Control and Countermeasures, storm water management, spill response activities, and leachate disposal.

- Represented foundry client in enforcement case regarding RCRA landfill closure and restricted waste site. Provided site investigation services and designed closure plans(s) of expansion areas. Specified liner and capping systems to meet regulatory guidelines and budgetary parameters. Provided consulting services on process changes to minimize wastes and change waste type.

- Designed and reviewed landfill designs for numerous sites. Designs included: leachate collection systems, natural and synthetic liners, capacity calculations, monitoring well system design and hydrogeologic studies.

- Determined the existence and extent of petroleum products contamination and developed appropriate remedial action programs at various service stations, bulk plants, and industrial sites throughout the Midwest.

- Conducted assessments of manufacturing complexes, service stations, commercial buildings and undeveloped sites. Evaluated these sites for the presence of soil and groundwater contamination, asbestos, PCB transformers, underground storage tanks, and illegal waste discharges.

- Managed underground storage tank programs, including subsurface investigation, tank testing, groundwater sampling, analytical testing, monitoring well installation and recovery system design and installation.

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DOUGLAS A. OPELL, LPG
SENIOR MANAGER, HYDROGEOGOLOGY/GROUNDWATER MODELING
Exp: 25 yrs.

Mr. Opell has B.S. and M.S. degrees in Geology from Indiana University and has over 22 years experience in the earth sciences and environmental fields. He is a Licensed Professional Geologist in Indiana, Kentucky, and Arizona. Mr. Opell has experience with consulting firms representing industrial and governmental clients with technical and regulatory matters in the field of ground water contamination, environmental compliance, and geotechnical engineering. Mr. Opell's technical and regulatory experience is capped with his ability to work with people -- clients, regulators, and legal counsel, and move projects to a manageable resolution.

Mr. Opell has expertise in Karst regions including foundations engineering investigations and inspections at the EPCOT site in Orlando, Florida and a gasohol plant in a Karst region of south-central Kentucky. These environmentally fragile and failure-prone foundation areas included drilling, geophysical and aerial photograph investigation techniques and design of deep foundations and high-pressure grouting in areas of suspect bearing capacity. Other general earth science consulting experience includes surface mine reclamation, coal slurry dam investigations, mining subsidence, *in-situ* rock permeability testing, solid waste landfill siting, groundwater monitoring, and permitting.

Mr. Opell also has program-specific expertise with RCRA – including siting criteria for landfills, RCRA permitting, audits, closures, Land Disposal Restriction (LDR) variances, delisting petitions, and corrective actions. Corrective action activities have included RFI Work Plans, groundwater quality assessment plans, compliance monitoring plans, and alternate concentration limit demonstrations. Additional areas of expertise include due diligence with environmental property transfer/acquisition/negotiations and assessment of existing and long-term environmental liabilities at complex sites. Mr. Opell has participated in purchase and sale agreement negotiations, legal counsel advice, and establishment of escrow accounts for multi-million dollar transactions.

His expertise includes groundwater chemistry fate and transport, including application of simple transport laws and geochemical behavior. He has used geochemical evaluations for demonstrations of natural attenuation, risk-assessment evaluations, and remediation screening to conduct this work. Mr. Opell has also managed remediation projects under Superfund, UST-programs, agency compliance orders, and various state environmental management programs.

KEY PROJECTS

- Heritage Environmental Services, LLC – Steel Mill Site – Crawfordsville, Indiana - RCRA RFI Implemented RFI Work Plan and Investigation.
- Heritage Environmental Services, LLC – RCRA TSD – Arizona – Investigations per RCRA Permit Client has "No Further Action" pending.
- RCRA Delisting Petitionfor F019 Wastestream. Developed and Implemented Sampling and Analysis Plan for Delisting Petition. Project is on-going.
- Preparation of sampling and analysis plan for F039 RCRA Delisting Petition at a Hazardous Waste Disposal Facility. Compilation of ground water and leachate data for the facility and use of Dilution Attenuation Factors (DAFs) from EPA's CML model.
- RCRA Ground-Water Quality Assessment Plan (GQAP) at stainless steel pipe manufacturing facility. Situated in complex faulted, folded and karst region of eastern Tennessee, unique investigatory techniques included aerial photo interpretation, radiometric survey, microgravity survey, and fracture/structural trend analyses.
- Remedial Design Tippecanoe Sanitary Landfill Superfund site (Lafayette, Indiana), Design and Build Project. A 70-acre site required design and installation of clay cap, installation of 23 vertical leachate recovery wells, and piezometers, methane extraction system, ground water monitoring from 23 existing wells, installation and monitoring of additional 12 wells.
- *In-situ* bioremedaiton of hydrocarbon and chlorinated VOCs using Department of Energy (DOE) propiertary technology. Aerobic-methanogenic co-metabolism coupled with air sparging and soil vapor extraction technologies used to successfully remediate extensive plume in sand and gravel aquifer.
- Site implicated by US EPA as responsible party for contamination of sole source aquifer and city water supply. Investigation was designed to provide Fortune 100 client with data to make informed decisions for response to DOJ lawsuit. Investigations involved use of vertical aquifer sampling and on-site portable gas chromatograph to verify presence and define extent of TCE impact in outwash aquifer.
- Assessment and remediation for release of 20,000 gallon gasoline release in residential area. Investigations included drilling, ground penetrating radar survey, and soil gas survey, plotting capture zones for recovery wells. Remediation progressed through free product recovery, air sparging, and soil vapor extraction. Administrative issues involved cooperation with local fire department, Town Council, and nearby residences.
- Investigation and Remediation Work Plan development for TCA release at industrial site. Subsurface impact to glacial till and interbedded sand employed used dual phase extraction techniques. Remedial system installed both inside operating plant and outside near former TCA storage tank.
- Installation of 200' ground water interceptor trench and recovery system with carbon treatment unit for U.S. Postal Service. Completed project without interruption of facility operations.

- Multi-million dollar property transfer involving petroleum exploration and production in Florida. Addressed numerous environmental concerns and evaluated jurisdiction of federal (National Park Service), state (state environmental and water management board), and local officials/commissions
- RCRA Work Plans, Investigations and Corrective Actions USEPA Region IV and V. Used latest US EPA guidance regarding risk-based calculations/exposure scenarios. RCRA Reform initiative used to design/implement innovative facility wide corrective actions.
- Expert witness for petroleum hydrocarbon contaminated site. Migration pathways, historic operations, spill records and consultant's reports for two neighboring facilities reviewed.
- RCRA Corrective Action Compliance Monitoring Plan and Alternate Concentration Limit Demonstration for closed hazardous waste landfill.
- Ground water modeling and contaminant mobility assessment for TCE and degradation compounds. Natural attenuation ground water monitoring plan developed and approved by regulatory agency.
- Assessment of lead and PCB contamination of 1-mile stretch of stream in residential neighborhood. Sampling and mapping of stream, preparation of reports and presentation to regulatory agency. Advised client regarding possible remedial measures for stream and source control in manufacturing plant.
- Industrial facility with leaking underground petroleum hydrocarbon storage tanks (USTs), a RCRA surface impoundment, and a former on-site burn pit area. Assessments included development of RCRA Closure Plan and corrective actions. RCRA Ground-Water Quality Assessment Program (GQAP) concentrated on mobility/retardation of hexavalent chromium. Closure of RCRA unit. Successfully petitioned for early end to post-closure ground water monitoring.
- Geologic and hydrogeologic assessment at an industrial area adjacent to Lake Erie. Property transfer at site targeted for multimillion-dollar shoreline revitalization project prompted an extensive site investigation. Ground water and soil contaminants identified were organic solvents, plasticizers, and heavy metals.

PRIOR EXPERIENCE

- Engineering geologic evaluations/hydrogeologic assessment in karst region of Western Kentucky. Defined local flow in karst terrain using geochemical techniques and aerial photography.
- Supervised field data acquisition at a highly publicized Superfund site near Dayton, Ohio. State and USEPA oversight. Site was set in principal aquifer of City of Dayton. Dayton's water supply already impacted with low level VOCs. Interfaced with consultants and government agencies in conceptual development of wellhead protection.
- Drilling and high-pressure grouting project in central-Florida. Active karst geology at the EPCOT (Disney World) site warranted grouting of potential sink areas. Infrared photograph interpretation used to identify active sinks.

- Hydrogeologic assessment at site proposed for hazardous waste disposal in Northcentral Illinois. Evaluation of rock coring, packer-pressure permeability tests, local and regional geologic conditions. Ultimately recommended against facility siting due to stratigraphic proximity to regional bedrock aquifer in northern Illinois.
- Design of subsurface exploration programs and ground water monitoring networks for several sanitary landfills in Ohio. Surface resistivity techniques employed/aerial photograph interpretations.
- Hydrogeologic evaluation of a RCRA leaking waste chlorinated solvent tank in northern Indiana. Evaluated pumping and recharge of industrial heat-pump systems that complicated local flow directions in outwash aquifer.
- Masters thesis - 3M Corporation Fellowship, 1983-1984 - *Hydraulic Fracture of Sandstone and Limestone in the Presence of Surfactants*. Surface chemistry and sorption phenomena, fluid flow in porous media, hydraulic fracture, stress corrosion theory.
- Provided drilling and sampling for glacial geologist at Indiana Geological Survey. Project involved mapping glacial till deposits of Indiana. Geophysical methods used to aid in mapping included gamma-ray logging and shallow seismic refraction.

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ROBERT S. FEDORCHAK, P.E.
SENIOR ENGINEER
Exp.: 15 yrs.

Mr. Fedorchak is a registered professional engineer with 15 years of experience in remediation engineering. Before joining KERAMIDA he worked for Geraghty & Miller and Fluor Daniel GTI where he managed, designed, constructed permitted and operated remediation projects and systems for industrial, commercial, and petroleum clients throughout the Midwest. Mr. Fedorchak has managed projects in accordance with a variety of regulatory programs, including LUST, VRP, Brownfields, RCRA, Solid Waste, and Superfund, and his remedial projects have included processes ranging from active (SVE/air sparging, high vacuum dual extraction, etc.) to passive (natural attenuation, plume stability) remediation. His experience also includes engineering design, permitting and construction oversight activities for landfills. He holds a B.S. in Civil Engineering from Virginia Polytechnic Institute and State University.

EMPLOYMENT HISTORY

1999 – Present	Senior Engineer KERAMIDA Environmental, Inc.
1998 – 1999	Project Engineer Fluor Daniel GTI
1992 – 1998	Staff Engineer Geraghty & Miller, Inc.
1991 – 1992	Project Engineer Buffalo Environmental Consulting Engineers

EXPERTISE

Phase I Environmental Site Assessments
Site Investigations
Remedial Design/Construction
Landfill Design/Construction
CERCLA/RCRA Management
UST Management/Closure
VRP Management/Closure
Project Management
Waste Treatment & Disposal
Health & Safety

EDUCATION

B.S. Civil Engineering, Virginia Polytechnic Institute and State University, May 1991

CERTIFICATIONS AND REGISTRATIONS

OSHA 40-Hour Hazardous Waste Activities Training, 1992
OSHA 8-Hour Refresher for Hazardous Waste Activities (annual)
OSHA 8-Hour Management/Supervisory Training, 1997
Registered Professional Engineer in Indiana

REPRESENTATIVE PROJECT EXPERIENCE

- **SOLID WASTE**

  - Design of Municipal Solid Waste (MSW), Construction and Demolition (C&D) Debris and Foundry Waste landfill facilities in New York and Indiana. Duties included; Project management, cover and liner design, storm water management/erosion and sediment control, construction specifications and costing, EPA HELP Model - water budget modeling, permitting, contingency/response plans, closure/post closure plans and engineering plans and reports.

  - Design of Solid Waste Transfer Stations in New York. Duties included; Permitting, contingency/response plans, closure/post closure plans and engineering plans and reports.

  - Supervised field work for CERCLA landfill investigation in Indiana. Duties included; Drilling supervision, environmental sampling (soil, sediment, waste, groundwater and surface water), performance of soil gas survey, slug testing, and health & safety procedure enforcement.

  - Member of Remedial Design Team for CERCLA landfill site in Indiana. Duties included; cover design; Storm water management/erosion and sediment control, construction costing, EPA HELP Model - water budget modeling, permitting, and development of engineering plans and reports.

  - Supervised the installation of several of pump & treat remedial systems for organic contaminants for CERCLA industrial remedial actions in Ohio and Michigan.

  - Managed and supervised field work for a closed RCRA landfill investigation in Indiana. Duties included; Project management, costing, environmental sampling (groundwater and surface water), and leachate seep maintenance.

  - Member of RD/RA Supervisory Team for a CERCLA landfill site in Indiana. Project dealt with various contaminants of concern including; Petroleum hydrocarbons, chlorinated hydrocarbons, metals, PCBs, pesticides, herbicides and methane. Duties included; Project

management, review of RD engineering plans and reports, RA oversight for the installation of a landfill cap, storm water management/sediment and erosion control system, methane extraction and monitoring system, leachate recovery system, and monitoring well network upgrade, and the review of RA engineering plans and reports.

- Member of Management Team for an industrial wastewater lagoon site in **Indiana**. Project dealt with various contaminants of concern including; Hydrogen sulfide, metals and fecal coliform. Duties included; Project management and costing for environmental sampling of sludge and surface water for land application purposes.

- **SITE INVESTIGATION/REMEDIATION**

  - Supervised field work for site investigations dealing with various contaminants of concern including; Petroleum hydrocarbons, chlorinated hydrocarbons, metals and PCBs. Duties included; Excavation and drilling supervision and determination of geologic components, environmental sampling (soil, sediment, groundwater and surface water) and health & safety procedure enforcement.

  - Performed and reduced more than twenty (20) pilot-scale field design tests for a variety of organic contaminant sites. Technologies tested included: high-vacuum dual-extraction, soil vapor extraction, bioventing, standard pump and treat, vacuum-enhanced pump and treat, and air sparging.

  - Designed, specified, permitted, procured and performed construction oversight for the installation of remediation systems for dissolved, free and absorbed phase organic contaminants at more than twenty (20) sites.

  - Performed start-up and operation & maintenance activities on various pump and treat, high-vacuum dual-extraction, vapor extraction and air sparging remediation systems for a variety of organic contaminants.

  - Developed operation & maintenance manuals and forms on various pump and treat, high-vacuum dual-extraction, vapor extraction and air sparging remediation systems.

  - Evaluated the performance of various pump and treat, high- vacuum dual-extraction, vapor extraction and air sparging remediation systems for various organic contaminants.

  - NPDES Industrial permits.

  - Managed over 75 projects of varying size including; Phase I and Phase II environmental site investigations, soil excavation/disposals, remedial technology pilot-testing to remedial system operation & maintenance. Projects have dealt various contaminants of concern including; Petroleum hydrocarbons, chlorinated hydrocarbons, metals and PCBs. Projects managed under various Indiana Department of Environmental Management (IDEM) programs including; Leaking Underground Storage Tank (LUST), Voluntary Remediation

Program (VRP), State Cleanup, Brownfields and RCRA. Duties included; Project management, proposal writing, health & safety plan development, field labor and subcontractor coordination, waste disposal, investigation and remediation report writing and invoicing.

- Performed evaluations of natural attenuation parameters for petroleum hydrocarbon sites.

PROFESSIONAL TRAINING

Landfill Gas Basics, SWANA, October, 2002
Design of Waste Containment and Final Closure Systems, ASCE, March, 2002
Hydrologic Engineering Center – River Analysis Systems (HEC - RAS), January, 2000
13th Annual Civil Engineering Professional Development Seminar, ASCE, Indiana Section of ASCE, and Purdue University – School of Civil Engineering, November, 1998
ASCE Environmental Engineering Conference, August, 1994
Principles of Groundwater Hydrology, NGWA, August, 1993
Treatment Technology for Contaminated Soils and Groundwater, NGWA, January, 1993
Advanced Landfill Final Cover System Design and Construction Seminar, NYSDEC, USEPA, and NYSSWMA, January, 1992

BRUCE WINNINGHAM, LPG
SENIOR GEOLOGIST, INVESTIGATION SERVICES
Exp: 20 yrs.

Mr. Winningham is a Licensed Professional Geologist with 21 years experience and holds an M.S. in Geology from Miami University and a B.A. in Geology from Earlham College. He is primarily responsible for supervising projects that involve geologic investigations and hydrogeologic assessments at LUST, RCRA and CERCLA sites. Included in these responsibilities are cost estimating, data evaluation, statistical analysis of laboratory data and project management in conjunction with the design and implementation of soil, sediment, and ground-water sampling programs for site characterizations, ground water monitoring systems, hydrogeologic assessment reports and remedial action plans. Mr. Winningham has also performed numerous Phase I and Phase II Environmental Site Assessments for property transfers on various industrial and commercial and vacant land sites.

Prior to working as a Senior Geologist at KERAMIDA, he was a Senior Geologist with Heritage Environmental Services for ten years. Mr. Winningham was a Staff Geologist at the IDEM Office of Solid and Hazardous Waste Management and the Office of Environmental Response, for several years earlier in his career, providing geologic technical support for solid waste facility permits and LUST, State Cleanup and CERCLA programs.

EDUCATION

B.A., Geology, Earlham College, 1981
M.S., Geology, Miami University, 1988
Thesis: *Speciation and Fate of Heavy Metals in a Xenia Silt Loam Amended with Milorganite in Southwestern Ohio*

EMPLOYMENT HISTORY

Geologist II, Indiana Department Environmental Management, Indianapolis, IN 12/85-9/89 – Provided geologic and hydrogeologic technical support for Solid Waste Landfill permit applications and the LUST, CERCLA and State Remediation Programs. A highlight of his tenure was the development of geologic exploration standards and ground-water monitoring parameters for the new solid waste disposal regulations.

Formation Analyst, Exploration Logging USA, Inc., Houston, TX 3/82-5/83 - Responsible for setting up logging data sensors, and monitoring the geologic, geochemical, and engineering parameters of oil wells drilled off the Massachusetts and Louisiana coasts, and in the Appalachian Basin.

KEY PROJECTS

- Evaluation of background data and development of statistical test methods for an industrial Subtitle D landfill in Indiana. Perform routine statistical analysis of semi-annual ground-water monitoring data.

- Evaluation of background and site data to develop ground water monitoring and statistical analysis program for a small, closed municipal solid waste landfill in Indiana. Manages semi-annual ground-water sampling and analysis and performs statistical analysis for submission to State regulatory agency.
- Implementation of a soil and ground water investigation at various solid waste management units at a RCRA facility over a sand and gravel aquifer.
- Performed Phase I Environmental Site Assessments at numerous industrial and commercial facilities.
- Implemented Phase I/Phase II at a former solvent based coatings facility in an urban setting. Developed and implemented remediation plan for site areas of concern using draft state RISC Program criteria for remediation goals.
- Developed and implemented a Waste Characterization Plan for two SWMU's at a decommissioned oil refinery in Ohio.
- Implemented audit findings for a small manufacturing facility to bring environmental and health and safety programs into compliance with Federal and State regulations. Activities included: developing and implementing Waste Characterization Plan as required under RCRA, updated Contingency Plan, performed weekly waste accumulation and storage area inspections, implemented Storm Water Monitoring Program, performed annual Tier I/Tier II and Form R reporting, updated and maintained MSDS files, trained and assisted Environmental Program Manager hired by the company.
- Performed historic review of a petroleum pipeline pumping station and storage facility located in Indiana. Developed and implemented subsurface investigation to define limits of a petroleum release to a shallow sand and gravel aquifer discharging to adjacent creek causing an oil sheen on the surface water.
- Numerous LUST investigations to determine magnitude and extent of releases and development of Corrective Action Plans with remedial technologies including: excavate and dispose of contaminated soil, pump and treat, air sparging/SVE systems, and injection of slow release oxygen compounds into the subsurface.
- Designed and implemented subsurface investigation to trace released trichloroethane in a complex glacially derived geologic environment. Release impacted numerous separate lateral and vertical sand seams and intervening till matrix. Remediation activities include free product removal, ground water extraction and SVE.
- Implemented and supervised two year ground water monitoring program during the construction phase of the Tippecanoe Sanitary Landfill Superfund Site remediation.

PROFESSIONAL MEMBERSHIPS/CERTIFICATIONS

Licensed Professional Geologist Number 993 (Indiana) 1990

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CHARLES B. GOODWIN
PROJECT GEOLOGIST
Exp: 5 yrs.

Mr. Goodwin holds a B.A. in Geology from Miami University, Oxford, Ohio. He has four years of experience and is certified in OSHA Hazardous Waste Operations and Emergency Response. Mr. Goodwin's professional experience includes the performance of Phase I and II Environmental Site Assessments, site characterizations, groundwater monitoring, and data QA/QC. Mr. Goodwin is also experienced in aquifer testing, aerial photography, clean hands mercury sampling, and the Indiana Wellhead Protection Program.

Areas of Expertise

- Phase I and Phase II Environmental Site Assessments
- Aquifer Testing
- Soil and Groundwater Data and Statistical Analysis
- Indiana Wellhead Protection
- Aerial Photography
- Clean Hands Mercury Sampling
- Hydrogeologic Investigations
- Data QA/QC

Key Projects

- Conducted subsurface investigations and prepared Initial Site Characterization Reports and Further Site Investigation Reports for a site in Spencer, Indiana, and for a site near Columbus, Indiana.
- Supervised a significant petroleum source removal project and currently evaluating monitored natural attenuation trends.
- Prepared five (5) Wellhead Protection Plans for the Indiana Department of Corrections.
- Currently manage several routine groundwater sampling and site investigation projects.
- Managed a LUST project in Plainfield, Indiana from the initial soil excavation through geologic investigation, and received a No Further Action letter from IDEM.
- Conducted an emergency response soil sampling and hydrogeologic investigation at a petroleum pipeline rupture site in southwestern Indiana.

Professional Employment

2004 – Present	KERAMIDA Environmental, Inc. Project Geologist
2001 – 2004	Heritage Environmental Services, LLC Project Geologist I

Education

B.A. Geology, Miami University, 2000
(Minor in Physical Geography)

Certification

40-Hour OSHA Certification

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CHRISTINA HAVILAND
SENIOR TOXICOLOGIST, RISK ASSESSMENT SERVICES
Exp: 19 yrs.

Ms. Haviland has over 15 years of experience in risk assessment and toxicology research and application, and has performed both human health and ecological risk assessments for a plethora of projects, under various regulatory programs including Superfund, RCRA Corrective Action, VRP, RISC, and other state programs. She holds B.S. and M.S. degrees in Biology and Zoology from Indiana Wesleyan University and Miami University, and has practiced since 1987 in the toxicology/risk assessment field with both the U.S. EPA and the private sector. She conducted ecological toxicity research as part of her M.S. degree, and human health toxicity research at the USEPA Health Effects Research Laboratory. She is a Registered Hazardous Substances Professional through the National Environmental Health Association. She is a member of the KERAMIDA Litigation Experts Group.

EDUCATION

M.S. in Zoology - Miami University, 1988, Concentration in Toxicology
B.S. in Biology - Indiana Wesleyan University, 1985

TECHNICAL EXPERTISE

Toxicology
Human Health Risk Assessment
Ecological Risk Assessment
NEPA/Environmental Assessments
Biological Surveys and Planning
Wetlands
Natural Resource Management

CERTIFICATIONS AND REGISTRATIONS

OSHA 40-Hour HAZWOPER and 8-Hour Supervisor Training, annual updates 1993 to present
National Environmental Health Association, Registered Hazardous Substance Professional
Storm Water Multi-Sector Permit Training, 1996
Naturally Occurring Radioactive Materials (NORM) Training, 1995
State of Texas lead inspector and risk assessor training, 1996

REPRESENTATIVE PROJECT EXPERIENCE

- Project manager for human health risk assessments, ecological risk assessments, terrestrial and aquatic ecological surveys, and natural resources management plans, and risk assessor for risk-based corrective actions. Clients have included federal agencies, state agencies, and private clients.

Human Health and Ecological Risk Assessments

- Completed hundreds of human health and ecological risk assessments for Superfund sites, voluntary cleanup sites, and petroleum release sites.

- Completed human health risk assessment for stainless steel foundry focusing on potential health risks from inhalation of emission constituents.

- Worked with USEPA Region 6 to develop risk assessment protocol for hazardous waste combustion facilities.

- Conducted ecological and human health toxicity research for government and private programs.

Ecological Surveys and Natural Resources Management

- Manager and team member of biological surveys at military installations to assist in their natural resource management planning. Coordinated the planning, field effort, and reporting of diverse survey components including flora, mammals, birds, herpetofauna, and fish.

- Wetlands delineation, mitigation, and monitoring.

- Biological surveys of diverse habitats including woodlands, prairies, freshwater and brackish aquatic habitats, mountain scrub/shrub habitat, and agro ecosystems.

- Avian surveys.

- Bioassessments of benthic invertebrates in aquatic ecosystems.

- Threatened and endangered species surveys.

- Natural resource management planning.

NEPA/Environmental Assessments

- Performed EA for Federal Courthouse in Cape Girardeau, Missouri.

- Reviewed U.S. Department of Defense Environmental Baseline Survey for Transfer (EBST), Finding of Suitability to Lease (FOSL), and Finding of Suitability to Transfer (FOST) for Fort Benjamin Harrison, Indiana.

- Environmental investigation for proposed Federal campus in Oklahoma City, Oklahoma.

- Reviewed environmental assessments and investigations for international bridge and border station in Eagle Pass, Texas.

- Natural Resources Management Plans for U.S. Department of Defense facilities.

- Planning Level Surveys for aquatic and terrestrial ecosystems for U.S. Department of Defense facilities.

Investigation/Remediation

- Worked on sites including federal Superfund, state Superfund, RCRA, and Voluntary Remediation Program (VRP) sites such as military installations, manufacturing facilities, battery recycling facilities, leaking underground storage tank (LPST) sites, and spill sites.

- Manager and team member of risk-based corrective actions completed under the voluntary cleanup programs of the states of Indiana, Texas, Oklahoma, Missouri, Kentucky, and Louisiana.

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STEVE COBB
PROJECT MANAGER
Exp.: 8 yrs.

Mr. Cobb has managed and performed field activities in hundreds of projects involving hazardous waste removals, site investigations, remediations, UST management, site assessments and industrial air inspections. Mr. Cobb holds a Bachelor of Science degree in Environmental Management from the Indiana University and a Master of Business Administration degree from the University of Indianapolis. He holds the following certifications: Health and Safety Training - OSHA 29 CFR Part 1910 and 1926; Federal Method 303 Coke Oven Inspection; and Federal Method 9 Visible Emission Evaluation.

EMPLOYMENT HISTORY

2006 – Present	Project Manager KERAMIDA Environmnetal, Inc.
2005 - 2006	Project Coordinator Conestoga-Rovers & Associates
1999 - 2005	Project Scientist KERAMIDA Environmental, Inc.

EDUCATION

Indiana University, Bloomington, Indiana
Bachelor of Science in Environmental Management, July, 1999

University of Indianapolis, Indianapolis, Indiana
Master of Business Adminstration, July 2005

EXPERTISE

Site Investigation/Remediation
Site Assessment
UST Management/Closure
Waste Management & Disposal
Method 303 Coke Oven Inspection
Method 9 Visible Emissions Inspections
Emissions Testing
Indoor Air Quality

CERTIFICATIONS

OSHA 40-hour HAZWOPER, 1999
Visible Emissions Evaluator: September 2006
Method 303 Observer, 2002

PROFESSIONAL EXPERIENCE

National Emission Standard for Hazardous Air Pollutants (NESHAPs) projects include U.S. Environmental Protection Agency (USEPA) Method 303 inspections and program management for services provided to the City of Indianapolis and State of Indiana at three coke plant facilities.

Phase I Environmental Site Assessments including interviews with owner and local official, historical and environmental record searches, review of wastestreams and disposal records and site visits to identify potential environmental concerns.

Phase II Environmental Site Investigations including sampling of soil and groundwater using push-probe technology and conventional drill rigs, installation of monitoring wells, soils characterization, analytical data review and report preparation for hundreds of sites.

Leaking Underground Storage Tank (LUST) projects including the removal of underground storage tanks, initial site characterizations, corrective action plans and remediation. Remediation of the site using soil excavation/disposal, land farming, air sparging and soil vapor extraction. Related projects include the removal and investigation of oil/water separators and hydraulic lifts.

Brownfield project of investigation of a former industrial facility for the purpose of redevelopment as an art school and apartments.

Voluntary Remediation Program (VRP) projects including soil and groundwater investigation, soil remediation, and sample splitting with the agency.

Resource conservation Recovery Act (RCRA) projects including the closure of hazardous waste storage areas and the identification and sampling of hazardous and non-hazardous wastestreams.

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TIMOTHY R. NORTHAM, L.P.G.
SENIOR MANAGER, DUE DILIGENCE SERVICES
Exp: 24 yrs.

Mr. Northam is a Senior Project Manager at KERAMIDA Environmental, Inc. He has over 24 years of professional experience as a Geologist, with emphasis in the environmental and groundwater resource consulting industries. Mr. Northam's environmental experience has focused on investigations and remediation of sites contaminated with petroleum, chlorinated solvents, metals and PCBs. He has worked on hundreds of sites that range from gas stations to terminals to complex industrial facilities. This work has included comprehensive investigations, fate and transport modeling, corrective action plans, and design and implementation of remedial actions under various regulatory programs including VRP, LUST, CERCLA, and RCRA. Mr. Northam's water resource experience has focused on groundwater resource planning, public water supply well field development, and implementation of wellhead protection programs for municipal and private utilities. This work has included developing groundwater resource Geographic Information System (GIS) databases, groundwater modeling projects utilizing analytical element and finite element modeling software to assess groundwater flow and pumping under stressed conditions, mining impacts related to dewatering activities near municipal well fields, and delineating wellhead protection areas for various times of travel. He holds a B.S. degree in Geology from Indiana State University and is licensed as a Professional Geologist in three states.

EDUCATION

B.S., Geology, Indiana State University, 1981

TECHNICAL EXPERTISE

Groundwater Resource Planning
Site Investigation and Remediation
Drilling/Downhole Logging/Coring Techniques
Groundwater Modeling

CERTIFICATIONS AND REGISTRATIONS

Indiana Licensed Professional Geologist
Kentucky Licensed Professional Geologist
Illinois Licensed Professional Geologist
OSHA 40-hour Training in Accordance with OSHA 29 CFR 1910.120

REPRESENTATIVE PROJECT EXPERIENCE

- Project manager for developing a Geographic Information System (GIS) database for a municipal water utility. Database includes coverage for municipal well fields, wellhead protection, residential and commercial water wells, USGS monitoring wells, utility test wells, land use, and potential contaminant sources.

- Project manager for groundwater modeling project utilizing GFLOW and GMS software to assess mining impacts related to dewatering activities near municipal well fields.

- Project manager for assisting municipal utility with groundwater resource planning and well field development. Project included test drilling using mud rotary and rotosonic drilling technology, high capacity pumping well design, aquifer pump test design, oversight and interpretation, and aquifer yield assessment.

- Project manager for conducting a groundwater resource assessment for a municipal utility serving 35,000 people. Assessment encompassed a study area of approximately 32 square miles and included the development and calibration of a groundwater flow model to evaluate the potential for expansion of the Utilities groundwater supply.

- Project manager for implementing Phase I and Phase II Wellhead Protection (WHP) Programs in Indiana. Worked with local government, utility and planning groups and developed public outreach strategies, developed hydrogeologic conceptual models, performed WHP area delineations for multiple well fields in a variety of geologic settings using both GFLOW and Visual MODFLOW software packages, performed potential contaminant source inventories and developed management and contingency plan strategies. Prepared WHP Area Delineation Reports, Phase I WHP Plans, and assisted communities with Phase II planning and implementation activities.

- Project manager for initial investigation through final assessment of trichloroethylene plume in an unconfined drinking water source aquifer in eastern Indiana. The assessment included a phased approach for soil and groundwater investigation, residential well sampling, coordination with local government, responsible party and residents during the investigation, and the installation of point-of-use carbon adsorption systems for treating VOC-impacted residential water wells.

- Project manager for developing and updating Storm Water Pollution Prevention Plans at international as well as several regional airports in Indiana.

- Project manager for developing Spill Prevention Control and Countermeasure (SPCC) Plans for a large pork processing plant in Illinois and air transportation facilities in Indiana.

- Project manager for developing Risk Management Plans for chlorine gas at municipal water and wastewater treatment facilities in Indiana.

- Prepared IDEM approved Sampling and Analysis Plans (SAP) and Closure Plans for international airport's deicing fluid (propylene glycol) detention basins.

- Project manager for RCRA corrective action site at secondary metals facility located in northwest Indiana. RCRA Facility Investigation (RFI) conducted in response to a consent decree with USEPA and an agreed order with IDEM. Environmental contaminants included metals and organics impacting soil, groundwater, lake water, and lake sediment. Offsite contaminant plume delineated using cone-penetrometer technology and multi-layer groundwater sampling.

- Project manager for Voluntary Remediation Program (VRP) site at an electronics manufacturing facility in Indiana. Environmental issues included chlorinated solvents in soil and off-site groundwater. Prepared VRP application, performed regulatory negotiations for client, and prepared Phase II Assessment Report.

- Project manager for court-ordered DNAPL investigation through remediation at a printing facility in Indiana. Performed oversight during field sampling and subsurface investigation work. Prepared Work Plan and Groundwater Remediation Plan.

- Project manager for PCB soil and groundwater investigation at aluminum manufacturing facility in Indiana. Developed groundwater sampling methodology that was incorporated into standard operating procedures for dedicated bladder pump/low flow purge and sampling techniques.

- Project manager for subsurface investigation work (using both hydraulic direct push and conventional hollow stem auger/split spoon sampling methodology) to delineate LNAPL at a closed refinery in Indiana. Results of investigation incorporated into subsequent remedial design, implementation, and operations/maintenance projects for LNAPL recovery system at the site.

- Supervised, designed, and conducted numerous remedial design tests (air sparge, SVE, liquid-ring vacuum/groundwater extraction, and combination vapor extraction/groundwater pumping pilot tests) at a variety of commercial and industrial sites. Design test results incorporated into Corrective Action Plans and remedial system design/installations.

- Coordinated and supervised large drilling projects at RCRA and Superfund sites in Indiana and Kentucky. Drilling included bedrock coring and logging (employing both air and mud rotary techniques), monitoring well design and construction in multi-layer aquifers, well development and aquifer testing.

- Conducted groundwater computer modeling for simulation of flow regime and solute transport under limited aerobic and anaerobic biodegradation (BIOPLUME II) for several hydrocarbon sites in Indiana. Model results incorporated into risk-based Corrective Action Plans subsequently approved by IDEM.

- Project manager for site investigations through remediation at rail yards in Indiana and Kentucky. This experience includes emergency spill response and interim abatement. Subsurface investigation results following spill abatement at a rail yard in Kentucky were incorporated into a risk assessment.

- Project manager for UST removals in Indiana. Coordinated, directed, and provided oversight during tank removals, performed soil and groundwater sampling activities, performed and managed remedial activities/site closures, and reported results to clients and state regulatory personnel.

- Project manager for Phase I/Phase II environmental site assessments for banks, law firms, and private industry.

- Project manager for site assessment, remediation and monitoring at over 30 service stations and bulk terminal sites for two major oil companies in Indiana. Project management technical responsibilities included oversight and technical QA/QC for site assessments, negotiations with regulatory personnel, and preparing Health & Safety Plans, Site Assessment Reports, Corrective Action Plans, and UST Closure Reports. Administrative project management responsibilities included budget development and tracking and preparing monthly and quarterly progress reports.

- Coordinated and supervised groundwater sampling activities at Superfund sites in Indiana and Kentucky.

- Technical advisor for regional groundwater flow modeling using analytical element models.

- Technical support for several Superfund sites in Bloomington, Indiana area. These sites all involved hydrogeologic studies and PCB monitoring of groundwater and surface water in karst terrain.

- Well site geologist on more than 250 oil and gas test/production wells in Oklahoma, Texas, New Mexico, and Utah. Position as District Geologist included binocular microscope examination of rock cuttings, rock coring, drill-stem testing, supervision of drilling and logging crews, planning and oversight of well-site geophysical logging and the interpretation of down hole geophysical logs, decision making, and report writing. This position also entailed generating oil and gas prospects within the Anadarko Basin of Oklahoma and Texas.

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DOYLE FLORY
FIELD MANAGER
Exp: 30 yrs.

Mr. Flory has over 30 years experience in managing emergency response activities and performing operations and maintenance activities at hazardous waste landfills and Superfund landfill sites. He has provided on-site management and performed spill containment/recovery actions, soil excavation and contaminated groundwater pumping and treatment services. He has performed all aspects of field operations related to closure and maintenance of landfills, including development and implementation of site construction plans, health and safety plans, and work progress reports. Prior to 1991, he was the operator of a hazardous waste landfill, and since 1991, he has provided O&M services and remedial construction oversight at Four County Landfill (state head) and Tippecanoe Landfill (Superfund). He is a heavy equipment operator and a Certified Hazardous Waste Operations Supervisor. Mr. Flory currently reports to our Rochester, Indiana (Four County Landfill) office.

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JASON W. CONDRY
SENIOR TECHNICIAN
Exp: 4 yrs.

Jason Condry is a Senior Technician with over eight years of related environmental experience. Mr. Condry is responsible for the installation, operation and maintenance of remediation systems, assistance in remedial designs, construction management, collection of field data, and preparation of related documentation. He is an operator of heavy construction equipment and push-probe rigs. Mr. Condry has attended the Marine Corps Institute, Purdue University, and Palomar College. He holds a Class B CDL License with HAZMAT and Tanker Endorsements.

AREAS OF EXPERTISE

Field Investigations
Remediation
Remediation Systems Installation and Operation & Maintenance

EDUCATION

Marine Corps Institute
Purdue University Agricultural Program
Palomar College

CERTIFICATIONS AND REGISTRATIONS

40-Hour OSHA Hazardous Waste Operations & Emergency Response (29 CFR 1910.120)
Class B CDL License with HAZMAT and Tanker Endorsements

EMPLOYMENT HISTORY

2002 - Present	Field Technician KERAMIDA Environmental, Inc.
1999 - 2002	Field Engineer Astbury Environmental Engineering, Inc.
1998 - 1999	Driller & Geoprobe Operator Environmental Field Services

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JASON JULIANO
FIELD TECHNICIAN
Exp: 10 yrs.

Mr. Juliano is presently going to Ivy Tech for a marketing Degree and had worked for Paramount Environmental for 2 years. He holds the following certifications: Water Well drilling license and 40 hour hazzwopper certified, with a Chauffeur License. Mr. Juliano has managed the Indianapolis office drilling for two years and has been in charge of ordering supplies, maintaining the field equipment, and field work. He has drilled in various conditions all over the eastern US.

KERAMIDA Environmental, Inc.

Technical Expertise

Environmental Engineering
Chemical Engineering
Civil Engineering
Geotechnical Engineering
Electrical Engineering
Mechanical Engineering
Geology
Hydrogeology
Geochemistry
Biology
Chemistry
Toxicology
Risk Assessment
Applied Physics
Atmospheric Sciences
Zoology
Industrial Hygiene
Safety
Occupational and Environmental Health
Atmospheric Chemistry
Engineering Sciences
Natural Resources Management
Modeling
CADD
Management Systems
Environmental Sciences

Higher Degrees

Ph.D. - 4
M.S. – 19

Patents

Dr. V. Keramida – 1

Technical Textbooks

Textbooks – 3
(Chapters in Waste Treatment, Landfill Design & Remediation, and Mold Management)
Manuals – 30

Certifications

- Professional Engineer
- Professional Geologist
- Certified Hazardous Materials Manager
- Certified Industrial Hygienist
- Certified by State Fire Marshal's Office to supervise, manage or direct the installation, testing, retrofitting, removal, or closure of USTs
- Certified Health & Safety Training as per OSHA requirements 29 CFR Part 1910 and 1926
- Certified Asbestos Inspector
- Certified Asbestos Project Supervisor
- Certified Asbestos Project Designer
- Certified Asbestos Microscopist
- Certified Asbestos Management Planner
- OSHA 1910.146: Confined Space Entry
- DOE: Radioactive Material Transportation Emergency Response
- EPA 165.4: Air Surveillance: Monitoring for airborne hazardous chemicals
- Federal Coke Oven Inspection Certification
- Federal Method 9 Visible Emission Evaluation Certification
- Licensed Professional Geologist in Indiana, Kentucky, Tennessee, Virginia, Arkansas, Illinois, Pennsylvania, South Carolina
- Registered Professional Geologist in North Carolina, California, Arizona
- Exam-Certified Registered Geologist in California
- Illinois Professional Geologist
- Exam-Certified Professional Geologist for Multiple States
- Registered Hazardous Substance Professional
- Registered Professional Engineers in Indiana, South Carolina, North Carolina, Pennsylvania, Michigan, Illinois, Ohio, Kentucky, Alabama, Tennessee and Virginia.
- Registered Professional Engineer in European Union
- Registered Qualified Environmental Professional
- Hazardous Waste Operations Supervisor
- Certified Industrial and Municipal Wastewater Treatment Operator
- Certified Safety Professional
- Certified Safety Manager
- Qualified ISO 14000 Lead Auditor
- Certified Professional under Ohio EPA Voluntary Action Program
- California Registered Environmental Assessor II
- Certified Analytical Chemist
- Certified Indoor Environmentalist
- RAB-QSA Certified Environmental Management Systems Associate Auditor

KERAMIDA ENVIRONMENTAL, INC.
TECHNICAL STAFF SUMMARY TABLE

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Keramida, Vasiliki Ph.D.	President and CEO Years of Experience: 25	Ph.D. M.S. B.S. Purdue University	Environmental Engineering	Waste treatment Site Investigation/Remediation Risk Assessment Brownfields CERCLA / RCRA NPDES Superfund Management Permits and Compliance Audits and ISO 14000
Dubenetzsky, Paul	Senior Vice President, Air & Energy Services Years of Experience: 33	B.S. Purdue University	Environmental Engineering	Air Permitting & Compliance Regulatory Assessments & Strategy Air Emissions Inventories Air Quality Assessments Pollution Prevention
Banaszak, Konrad Ph.D., L.P.G.	Senior Vice President, Investigation & Remediation Services [1,2,10] Years of Experience: 31	Ph.D. M.S. Northwestern University B.S. Beloit College	Geochemistry Geology Geology	Hydrogeology/Geology Geochemistry Site Investigations Remediation Modeling Risk Assessment Brownfields CERCLA/RCRA
Zabonick, Douglas B. P.E	Senior Vice President, Remediation Engineering [2,29,30,31] Years of Experience: 21	B.S. Michigan Technological University	Geotechnical Engineering	Remediation Engineering Site Investigations Landfill Design Audits and ISO 14000 Waste Treatment and Management Pollution Prevention CERCLA / RCRA UST Management/ Closure Due Diligence
Gremos, Andrew. M.S. L.P.G., C.H.M.M.	Senior Vice President, Investigations & Remediation [1,2,10,11,19,22,36, 39,41,42] Years of Experience: 19	M.S. Old Dominion University B.S. Indiana University	Geology Geology	Hydrogeology/Geology Site Investigations Remediation Modeling Risk Assessment Brownfields UST Management/Closure CERCLA/RCRA
Gobbi-Belcredi, Kristen P.E., C.H.M.M., QEP	Vice President, Engineering & EHS Compliance Services [1,2,12,13,14,15,19,29,30,35,57] Years of Experience: 18	B.S. Purdue University	Chemical Engineering	Industrial EHS Compliance Audits and ISO 14000 Waste, Air, Water Permits Water Management Waste Treatment and Management Pollution Prevention RCRA

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Schifo, James F. P.E., C.H.M.M.	Vice President, Air and Energy Services [19,30,38] Years of Experience: 35	B.A. General Motors Institute	Electrical Engineering	Process Engineering Process Control & Optimization Energy Use Air Toxics Management Air Permitting Air Emissions Inventories NPDES Permitting Landfill Permitting Industrial Compliance Audits and ISO 14000
Hogan, Terry M. Q.E.P.	Vice President, Power Industry Services [13,30,57] Years of Experience: 33	M.S. Eastern Illinois University B.A. Knox College	Sciences	Power Industry Water Management Permits and Compliance 316(a) (Thermal) 316(b) Cooling Water Intakes Wetlands Natural Resources Management PCBs Risk Assessment Audits and ISO 14000
Harrington, Brian	Vice President, Field Operations [2,3,4,7,8,14] Years of Experience: 14	B.S. Indiana State University	Environmental Health / Sciences	Site Investigation/Remediation Site Assessment UST Management/Closure Asbestos Management Waste Management & Disposal Method 303 Coke Oven Inspection Method 9 Visible Emissions Inspections Emissions Testing Indoor Air Quality
Apple, Cheryl	Vice President, Operations Years of Experience: 14	B.A. St. Joseph College	Business Administration	Project Cost Management Project Administration
Baugues, Keith P.E.	Technical Leader, Air Modeling Services [38] Years of Experience: 33	B.S. Rose Hulman Institute	Biological Engineering	Modeling Air Compliance Air Permits Air Pollution Control
Glowacki, Cliff CIH	Senior Industrial Hygiene and Chemistry Advisor [17] Years of Experience: 30	B.S. University of Wisconsin	Chemistry	Analytical Chemistry Chemistry Research Method Validation Industrial Hygiene Toxicology
Keramidas, George Ph.D.	Senior Advisor Years of Experience: 28	Ph.D. M.S. Purdue University B.S. University of Athens	Engineering Sciences Physics	Modeling Software Development
Kline, Stuart C.I.H., C.S.P., C.S.M., C.H.M.M.	Senior Industrial Hygienist [17,18,19,20] Years of Experience: 25	M.S. Wayne State B.S. Wayne State	Industrial Hygiene	Industrial Hygiene Health & Safety OSHA Compliance Health Physics Toxicology Indoor Air Quality

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Opell, Douglas L.P.G.	Senior Manager, Hydrogeology/Groundwater Modeling [2,10,11,56] Years of Experience: 25	M.S. B.S. Indiana University	Geology	RCRA Karst Hydrogeology Engineering Geology Site Investigations Remediation Geochemistry
Luther, Ann P.E.	Brownfields & Construction Management Coordinator[29] Years of Experience: 25	M.A. Webster University B.S. Purdue University	Computer Resource Management Civil Engineering	Project Management Technical Writing Contract Negotiation Brownfields Management Contract Management
Northam, Tim L.P.G.	Senior Manager, Due Diligence Services [2,10,11,47] Years of Experience: 24	B.S. Indiana State University	Geology	Groundwater Resource Planning Site Investigation and Remediation Drilling/Downhole Logging/Coring Techniques Groundwater Modeling
Foster, Eric P.E..	Manager, Engineering Serivces 2,15,19,29 Years of Experience: 20	M.S.C.E. B.S.C.E. Purdue University	Environmental Engineering	SPCC Plans/Regulations Wastewater Treatment, Regulations & Permits Industrial Waste Treatment System Design & Operation RCRA
Winningham, Bruce L.P.G.	Senior Geologist, Investigation Services [2,10] Years of Experience: 20	M.S. Miami University B.A. Earlham College	Geology	Hydrogeology/Geology Site Investigations Remediation UST Management/Closure RCRA
Guss, Sara	Senior Project Manager Years of Experience: 20	B.S. Purdue University B.S. Purdue University	Environmental Engineering Natural Resources	Solid Waste Management Landfills Natural Resources Management Public Education Regulatory Development
Gaddis,Rex	Sr. Manager, Asbestos & Lead Management Services 3,16,24,25,26,37	B.S. Indiana University	Education	Asbestos Management Lead Management Radon Indoor Air Quality
Laszcz, Ed., M.B.A.	Senior Project Manager Years of Experience: 20	M.B.A. Baldwin Wallace College B.A. Baldwin Wallace College	Mechanical Engineering	Air Permitting Air Compliance Industrial Compliance Pollution Prevention Audits

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Haviland, Christina S.	Senior Toxicologist, Risk Assessment Services[2,37,40,43] Years of Experience: 19	M.S. Miami University B.S. Indiana Wesleyan University	Zoology / Toxicology Biology	Toxicology Human Health Risk Assessment Ecological Risk Assessment Wetlands Natural Resource Management
Randall, Scott L.P.G., C.H.M.M.	Senior Manager, Building Decommissioning[2,4,10,14,19] Years of Experience: 19	B.S. Southeast Missouri State University	Geology	Decontamination/Demolition Hydrogeology/Geology Site Investigations Remediation Design/Construction UST Management/Closure RCRA
Melnyk, Ihor P.E., C.P.	Senior Project Manager [2,14,32,33] Years of Experience: 18	M.S. University of Cincinnati B.S.Ch.E. University of Cincinnati	Chemical Engineering Environmental Engineering	Site Investigations Remediation Brownfields Redevelopment UST Management SPCC Plans Emergency Response Plans
Clark, John	Senior CADD Operator Years of Experience: 17	Associate Degree IVY Tech	Architectural Drafting & Design	CADD
West, Frank L.P.G.	Senior Geologist, Investigation & Remediation Servicess [2,10,19,36] Years of Experience: 17	B.S. Ball State University	Geology	Remediation Design/Construction Site Investigation CERCLA/RCRA UST Management/Closure VRP Management/Closure
Sargent, Andrew	Project Manager [2,3,14,16,24,25,36] Years of Experience: 17	B.S. University of Dayton	Geology	Investigations/Remediation Modeling Asbestos Management Environmental Chemistry NPDES/Stormwater Internet Communications Development Brownfields VRP Management UST Management/Closure Phase I & II Site Assessments
Mallin, Kevin J. C.P.G., L.P.G., C.H.M.M.	Senior Geologist [1,2,10,19,36] Years of Experience: 16	M.S. B.A. Miami University	Geology	Hydrogeology/Geological Remediation System Design, Operation and Maintenance Risk Based Corrective Action Voluntary Remediation Program Geo-chemical Investigations Project Management Project Management Computer Applications Geologic Computer Applications

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Fedorchak, Robert P.E.	Senior Engineer [2,14,29] Years of Experience: 15	B.S. Virginia Polytechnic Institute & State University	Civil Engineering	Design/Construction Site Investigation/Remediation CERCLA/RCRA Landfill Design UST Management/Closure VRP Management/Closure Phase I Site Assessments Waste Treatment & Disposal Health & Safety
Gibbs, J.D.	Senior Manager, Ohio Operations Years of Experience: 13	B.S. Alleghany College	Geology	Air Permitting & Compliance Regulatory Assessments & Strategy Air Emission Inventories Risk Management Plans Stack Testing Oversight Investigations/Remediation UST Management/Closure Phase I Assessments NPDES/Stormwater Pollution Prevention/Waste Minimization
Moore, Kathleen	Sr. Manager, Air Services Years of Experience: 13	B.S. Purdue University	Biology	Air Permitting & Compliance Regulatory Assessments & Strategy Stack Testing Oversight Air Emissions Inventories Air Quality Assessments
Hair, Terry L., Jr. P. G., C.P.	Senior Manager, Cincinnati Operations [2,11,33,36,51,53,54,55] Years of Experience: 13	B. A. Miami University Oxford, OH	Geology	Brownfield Investigations Remedial Action Plan Preparations Phase I Environmental Assessments Phase II Environmental Assessments UST and AST Closures Environmentally Impacted Soil Excavation Groundwater and Soil Sampling Project Coordination
Dick, Monica, M.S.	Project Manager, Air Compliance Years of Experience: 11	M.S. Indiana University B.S. Ball State University	Environmental Management	Air Management Air Permits Industrial Compliance Pollution Prevention Public Involvement
Caldwell, Audra C.H.M.M., C.I.E.	Project Manager , [2,3,7,8,19,44] Years of Experience: 9	B.S. Purdue University	Industrial Hygiene	Industrial Hygiene Health & Safety Environmental Health Indoor Air Quality Toxicology OSHA Compliance Job Safety Analysis Safety Audits Asbestos Management Risk Assessment Method 9 Visible Emissions Inspections Method 303 Coke Oven Inspection

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Keith, Colin	Project Scientist [2,3,8,30] Years of Experience: 9	B.S. Indiana University	Biology	Field Investigations Phase I Environmental Site Assessment Asbestos Management Waste Classifications ELTF Reimbursements Wetlands Delineation Air Monitoring
Keramida, Elli Ph.D., P.E.	Research Engineer [34] Years of Experience: 9	Ph.D. M.S. B.S. Athens Polytechnic University	Chemical Engineering	Modeling Industrial Processes Environmental Engineering Engineering Research
Fillmore, Brittani C.H.M.M.	Manager,Compliance Services [8,14,19,30,45] Years of Experience: 8	B.A. Tusculum College Tennessee	Environmental Science	Environmental Health OSHA Compliance Safety Audits Method 9 Visible Emissions Inspections Industrial Compliance Waste, Air, Water Permits Audits & ISO 14000 Pollution Prevention RCRA
Chasco, Paul	Staff Geologist Years of Experience: 8	M.S. University of Toledo, Ohio B.S. North Dakota State University	Geology	Due Diligence Site Investigation/Site Remediation UST Management/Closure Hydrogeologic Investigations Asbestos Inspections Waste Management & Disposal Groundwater Sampling and Analysis Geologic and Hydrogeologic Investigations
Jones, Markus C.H.M.M., C.I.E.	Project Manager [2,3,19,,24,37,44] Industrial Hygienist Years of Experience: 8	B.S. Purdue University	Industrial Hygiene Health Physics	Industrial Hygiene Health & Safety Asbestos Management Air Monitoring Lead Management Indoor Air Quality Environmental Health Toxicology Method 9 Visible Emissions Inspections Source Sampling
Oliger, Angelique, M.S.	Project Manager Years of Experience: 7	M.S. Pennsylvania State University B.S. Purdue University	Environmental Pollution Control Applied Physics	Air Permitting & Compliance Regulatory Assessments & Strategy Stack Testing Oversight Air Emissions Inventories Air Quality Assessments Audits

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Cobb, Steve	Project Manager Years of Experience: 7	MBA B.S. Indiana University	Master in Business Administration Environmental Science	Site Investigation/Remediation (Phase I & Phase II) UST Management Environmental Construction Management / Oversight Closure Waste Management / Disposal Sampling – Soil-Gas, Indoor Air, Soil, Groundwater & Stormwater Method 303 Coke Oven Inspections Method 9 Visible Emissions Inspections
Goodwin, Charles	Project Geologist[2] Years of Experience: 5	B.A. Miami University	Geology	Hydrogeologic Investigations Phase I & II Environmental Site Assessments Aquifer Tests Clean Hands Mercury Sampling Data QA/QC Aerial Photography Indiana Wellhead Protection
Moore, Ryan	Project Manager[2] Years of Experience: 5	B.S. Manchester College	Environmental Studies	Site Investigation/Remediation (Phase I & Phase II) UST Management Environmental Construction Management / Oversight Closure Waste Management / Disposal Wetlands Assessment / Delineation Compliance Audits Sampling – Soil-Gas, Indoor Air, Soil, Groundwater & Stormwater
Nelson, Ashley	Project Scientist Years of Experience: 1	B.S. Indiana State University	Environmental Health & Safety	Environmental Health OSHA Compliance Safety Audits Industrial Compliance
Winter,Brian	Staff Geologist Years of Experience: 1	B.S. Bowling Green State University	Geology	Site Investigation/Remediation Geologic Investigations Waste Mgt. & Disposal Ground Sampling & Analysis Hydrogeological Investigations Lab Pack Procedures for Hazardous Waste
Condry, Jason	Senior Technician Years of Experience: 4	Marine Corps Institute & Coursework at Purdue University	Environmental & Agricultural Studies	Remediation Systems Installation and Operation & Maintenance
Flory, Doyle	Field Manager [2,7] Years of Experience: 30		Remedial Field Activities	Method 303 Coke Oven Inspection Hazardous Waste Landfill Operator Construction Manager Remedial Construction Supervisor
McCulley, Leroy	Field Technician[7] Years of Experience: 30		Field Operations	Method 303 Coke Oven Inspection
Williams, Wayne	Field Technician[7] Years of Experience: 30		Field Operations	Method 303 Coke Oven Inspection

Name	Company Position	Technical Degree	Technical Subject	Areas of Expertise
Fruitt, Dave	Field Technician Years of Experience: 20		Field Operations	Method 303 Coke Oven Inspection Field Investigations Method 9 Visible Emissions Inspections Remediation Systems O&M
Juliano, Jason	Field Technician[2,7,8] Years of Experience: 10	Ivy Tech	Field Operation	Field Studies Field Investigations Method 303 Coke Oven Inspection
Rodman, Wes	Field Technician[2,7,8] Years of Experience: 2	B.S. Ball State University	Environmental Studies	Field Investigations Remediation Systems O&M Method 303 Coke Oven Inspection Geoprobe Operations
Swallow, Brian	Field Technician[7] Years of Experience: 1	B.S. Manchester College	Secondary Education	Method 303 Coke Oven Inspection
Swallow, Chuck	Field Technician[7] Years of Experience	B.S. Carthage	Business Management	Method 303 Coke Oven Inspection

CERTIFICATIONS/REGISTRATIONS

1 UST Decommissioning (Certified by State Fire Marshal's Office to supervise, manage or direct the installation, testing, retrofitting, removal, or closure of USTs)
2 Certified Health & Safety Training as per OSHA requirements 29 CFR Part 1910 and 1926
3 Certified Asbestos Inspector
4 OSHA 1910.146: Confined Space Entry
5 DOE: Radioactive Material Transportation Emergency Response
6 EPA 165.4: Air Surveillance: Monitoring for airborne hazardous chemicals
7 Federal Coke Oven Inspection Certification
8 Federal Method 9 Visible Emission Evaluation Certification
9 Certified by Ohio Division of State Fire Marshal as UST Installer
10 Licensed Professional Geologist in Indiana
11 Licensed Professional Geologist in Kentucky
12 Registered Professional Engineer in Indiana, South Carolina, North Carolina, Pennsylvania, Michigan, Illinois, Ohio, Kentucky, Alabama, Tennessee and Virginia.
13 Registered Qualified Environmental Professional
14 Hazardous Waste Operations Supervisor Training
15 Certified Industrial Wastewater Treatment Operator
16 Certified Asbestos Project Supervisor
17 Certified Industrial Hygienist
18 Certified Safety Professional
19 Certified Hazardous Materials Manager
20 American Board of Health Physics Certifications
21 CPN Radiation Safety and Use of Nuclear Soil Gauges
22 Licensed Professional Geologist in Tennessee
23 Registered Professional Geologist in North Carolina
24 Certified Asbestos Project Designer
25 Certified Asbestos Microscopist
26 Certified Asbestos Management Planner
27 Wetlands Delineation
28 Certified Safety Manager
29 Registered Professional Engineer in Indiana
30 Qualified ISO 14000 Lead Auditor
31 Registered Professional Engineer in Ohio, Michigan
32 Registered Professional Engineer in Kansas, Kentucky, Ohio
33 Certified Professional under Ohio EPA Voluntary Action Program
34 Registered Professional Engineer in European Union
35 Registered Professional Engineer under NCEES, allowing registration in all 50 states
36 Exam - Certified Professional Geologist, allowing certification in multiple states
37 Inspector for Lead in Buildings, passed the third party examination
38 Registered Professional Engineer in Illinois
39 Registered Geologist in California
40 Natural Occurring Radioactive Materials
41 Licensed Professional Geologist in Virginia
42 Licensed Professional Geologist in Arkansas
43 Registered Hazardous Substances Professional
44 Certified Indoor Environmentalist by Indoor Air Quality Association
45 Advanced Safety Certificate from National Safety Council
46 Registered Professional Engineer in Ohio, Pennsylvania
47 Licensed Professional Geologist in Illinois
48 Occupational Health & Safety Technologist
49 Registered Geologist in Missouri
50 Certified Groundwater Professional in Iowa
51 Registered Professional Geologist in Tennessee
52 Registered Professional Engineer in Ohio
53 Licensed Professional Geologist in Pennsylvania
54 Licensed Professional Geologist in South Carolina
55 OEPA VAP Certified Professional
56 Professional Geologist in Arizona
57 RAB-QSA Certified Environmental Management Systems Associate Auditor
58 Registered Professional Engineer in Kentucky

9/06

ATTACHMENT 3

Belmont Labs
25 Holiday Drive
Englewood, Ohio 45322-2706

TEL: *(937) 832-8242*
FAX: *(937) 832-2868*

31-Oct-06

QUOTATION for ANALYTICAL SERVICES

Company: Keramida Environmental, Inc.
Contact: Brian Harrington
Address: 401 North College Avenue
Indianapolis, IN 46202
Phone: (317) 685-6616 Fax: 317-685-6610

Submitted By:
Jeff Nottingham

Quote ID: K 7569
Project: IFA RFQ
TAT: 10 working days
QC Level: LEVEL II

Expires: 31-Dec-07

TEST ID	Matrix	Test Name	Test	Remarks	# Samp	Unit Price	Test Total
SUPPLIES		Sampling Supplies		5035 Smart Kit	1	$18.50	$18.50
PMOIST	Soil	Percent Moisture	D2216	Dry Weight Calc	1	$5.00	$5.00
RCRA METAL	Soil	8 RCRA Metals, Soil 6000/7000 Series	NA		1	$65.00	$65.00
RCRA METAL	Aqueous	8 RCRA Metals, Water 6000/7000 Seri	NA		1	$65.00	$65.00
CPAH_IDEM_	Soil	Carcinogenic PAH List, Soil Comm/Ind	NA		1	$75.00	$75.00
CPAH_IDEM_	Soil	Carcinogenic PAH List, Soil Residential	NA		1	$75.00	$75.00
CPAH_IDEM_	Aqueous	Carcinogenic PAH List, Water Comm/In	NA		1	$75.00	$75.00
CPAH_IDEM_	Aqueous	Carcinogenic PAH List, Water Resident	NA		1	$90.00	$90.00
PAH_IDEM_S	Soil	Full PAH List, Soil Residential	NA		1	$75.00	$75.00
PAH_IDEM_S_	Soil	Full PAH List, Soil, Comm/Ind	NA		1	$75.00	$75.00
PAH_IDEM_W	Aqueous	Full PAH List, Water, Comm/Ind	NA		1	$75.00	$75.00
PAH_IDEM_W	Aqueous	Full PAH List, Water, Residential	NA		1	$90.00	$90.00
IN UST METAL	Soil	Indiana UST Metals, Soil	NA		1	$59.00	$59.00
IN UST METAL	Aqueous	Indiana UST Metals, Water	NA		1	$59.00	$59.00
TPH_GRO_W_	Aqueous	Gasoline Range Organics, Comm/Ind	SW8015A-mod		1	$30.00	$30.00
TPH_GRO_W_	Aqueous	Gasoline Range Organics, Residential	SW8015A-mod		1	$30.00	$30.00
TPH_GRO_S_I	Soil	Gasoline Range Organics, Residential	SW8015A-mod		1	$30.00	$30.00
TPH_ERO_W_	Aqueous	Extended Range Organics, C10-C36 R	SW8015M		1	$37.50	$37.50
TPH_ERO_S_I	Soil	Extended Range Organics, C10-C36 R	SW8015M		1	$37.50	$37.50
BTEX_MTBE_	Aqueous	Aromatic Volatile Organics	SW8021B		1	$39.00	$39.00
BTEX_MTBE_	Soil	Aromatic Volatile Organics	SW8021B		1	$39.00	$39.00
VOC_S_IDEM	Soil	Volatile Organic Analysis, Comm/Ind	SW8260A		1	$80.00	$80.00
VOC_S_IDEM	Soil	Volatile Organic Analysis, Residential	SW8260A		1	$80.00	$80.00
VOC_W_IDEM	Aqueous	Volatile Organic Analysis, Comm/Ind	SW8260B		1	$80.00	$80.00
VOC_W_IDEM	Aqueous	Volatile Organic Analysis, Residential	SW8260B		1	$80.00	$80.00
SVOC_W_SIM	Water	Semivolatile Organics by SIM, Resident	SW8270C	Add to SVOC/Res	1	$25.00	$25.00
SVOC_S_IDE	Soil	Semivolatile Organics, Comm/Ind	SW8270C		1	$143.50	$143.50
SVOC_W_IDE	Water	Semivolatile Organics, Comm/Ind	SW8270C		1	$143.50	$143.50
SVOC_W_IDE	Aqueous	Semivolatile Organics, Residential	SW8270C		1	$143.50	$143.50
SVOC_S_IDE	Soil	Semivolatile Organics, Residential	SW8270C		1	$143.50	$143.50

Company:	Keramida Environmental, Inc.		Submitted By:
Contact:	Brian Harrington		Jeff Nottingham
Address:	401 North College Avenue Indianapolis, IN 46202		
Phone:	(317) 685-6616	Fax: 317-685-6610	

Quote ID:	K 7569	Expires:	31-Dec-07
Project:	IFA RFQ		
TAT:	10 working days		
QC Level:	LEVEL II		

TEST ID	Matrix	Test Name	Test	Remarks	# Samp	Unit Price	Test Total

Misc Comments:

Sub total:	$2,093.50
Misc:	$0.00
Discount:	0.00%
Surcharge:	0.00%
TOTAL:	**$2,093.50**

Comments: Includes all bottles, preservatives, and electronic data deliverables.

STATE OF INDIANA

Mitchell E. Daniels Jr., Governor

DEPARTMENT OF ADMINISTRATION
Minority and Women's Enterprises Division

Indiana Government Center South
402 West Washington Street, Room W469
Indianapolis, IN 46204
(317) 232 - 3061

February 24, 2006

Samuel F. Elam
Belmont Labs Inc.
25 Holiday Dr
Englewood, OH 45322

Subject: Application for MBE re-certification

Dear Mr. Elam,

Congratulations! The Indiana Department of Administration, Minority and Women's Business Enterprises Division is pleased to inform you that **Belmont Labs, Inc.** is hereby re-certified as a Minority-owned Business Enterprise (MBE).

This determination is based on information submitted to us, which indicates that your company provides a commercially useful function in the areas listed below. Only work performed in these areas will be counted towards Minority Business Enterprise participation:

NAICS CODE(S)

Code	*Description*
541380	Testing Laboratories "Except Veterinary"

UNSPSC CODES(S)

Code	*Description*
77101702	Environmental chemistry advisory services
77101701	Environmental sciences advisory services
77101505	Environmental monitoring
77101503	Environmental indicators analysis
77000000	Environmental Services
30222309	Research or testing facilities
60104200	Water testing and conservation and ecology
70171602	Water testing services
71122400	Well testing services
71122408	Periodic well testing services
71122409	Surface well testing services
71122810	Subsurface well testing services
71122505	Water or gas testing services
77121606	Soil pollution measurement or monitoring

This certification is valid through **February 28, 2009**. Although your certification is valid for a three-year period, you will be required to submit an annual *Statement of No Change*, which reflects updates regarding the issues critical to maintaining your certification. However, you must notify us immediately if any changes occur. Failure to notify us of changes or to provide the *Statement of No Change* form annually will result in revocation of your certification. Changes include, but are not limited to:

-Change in location or contact information (address, phone number, e-mail address, etc.)
-Change in services provided (amendment to certification)
-Change in ownership
-Change in control

In addition to your official notifications to this office, we encourage you to visit the Buy Indiana website at www.BuyIndiana.in.gov and update your Business Registration Profile. It is important that you review and update your profile regularly, because state purchasing agents and prime contractors will use this information to contact you for business opportunities. For questions regarding your registration profile,

you may contact Shirley Houston at (317) 232-6870. Please contact our office at (317) 232-3061 if you have any other questions.

Sincerely,

Claudia Cummings
Deputy Commissioner
Indiana Department of Administration
Minority and Women's Business Enterprises Division

CC/ra/nw
Cc:file

ENVision

ENVision Laboratories, Inc.
1439 Sadlier Circle West Drive
Indianapolis, IN 46239
Tel: 317.351.8632
Fax: 317.351.8639
www.envisionlaboratories.com

Keramida – IFA RFQ Fee Schedule

All Prices include:

- **Standard 7 business day TAT!!**
- Sample Containers, Labels, Preservatives, Coolers
- Chain-of-Custody Forms
- Level II QA/QC Documentation
- Reports in Hard Copy and Electronic Format
- Free Pick-up or Shipping via Overnight Courier

Analytical Fees & Services

Organics

Parameter	Method	Price
BTEX+MTBE	8260	$25
TPH-GRO	8015	$20
TPH-DRO	8015	$30
TPH-ERO (C8-C36)	8015	$30
Volatiles (VOCs)	8260	$65
Semi-Volatiles (SVOCs)	8270	$130
PNAs (PAHs)	8270	$70
PNAs (PAHs) low level	8270SIM	$70
PCB	8082	$65

Super Combo Specials

GRO+DRO	8015	$45
BTEX/MTBE+GRO+DRO	8260/8015	$70
BTEX/MTBE+GRO	8260/8015	$40
GRO+DRO+ERO	8015	$75
PNAs+SVOCs	8270+SIM	$190

Super Duper Combo Special!

BTEX+GRO+DRO+TPH-ERO	8260/8015	$100

ENVision Laboratories, Inc.
1439 Sadlier Circle West Drive
Indianapolis, IN 46239
Tel: 317.351.8632
Fax: 317.351.8639
www.envisionlaboratories.com

Metals

Parameter	Method	Price
Aluminum	EPA 6010B	10.00
Antimony	EPA 6010B	10.00
Arsenic	EPA 6010B	10.00
Barium	EPA 6010B	10.00
Beryllium	EPA 6010B	10.00
Boron	EPA 6010B	10.00
Cadmium	EPA 6010B	10.00
Calcium	EPA 6010B	10.00
Chromium, total	EPA 6010B	10.00
Cobalt	EPA 6010B	10.00
Copper	EPA 6010B	10.00
Iron	EPA 6010B	10.00
Lead	EPA 6010B	10.00
Magnesium	EPA 6010B	10.00
Manganese	EPA 6010B	10.00
Mercury	EPA 7470A/7471A	25.00
Molybdenum	EPA 6010B	10.00
Nickel	EPA 6010B	10.00
Potassium	EPA 6010B	10.00
Selenium	EPA 6010B	10.00
Silver	EPA 6010B	10.00
Sodium	EPA 6010B	10.00
Thallium	EPA 6010B	10.00
Tin	EPA 6010B	10.00
Vanadium	EPA 6010B	10.00
Zinc	EPA 6010B	10.00

Combo Specials

8 RCRA Metals	6010/7470A/7471A	$65
13 Priority Pollutant Metals	6010/7470A/7471A	$99

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Wet Chemistry

Parameter	Method	Price
Alkalinity	310.1	$15
Chloride	325.2	$15
Fluoride	340.2	$15
N, Ammonia	350.3	$15
Nitrogen, Nitrate	352.1	$15
Nitrogen, Nitrite	354.1	$15
Nitrogen, Nitrate + Nitrite	353.3	$15
pH	150.1/9045	$10
Sulfate	375.4	$15
Total Solids	160.3	$15
Total Suspended Solids	160.2	$15
Total Dissolved Solids	160.1	$15
Paint Filter Test	9095	$15

Waste Characterization

PARAMETER	METHOD	PRICE
Closed-Cup Flashpoint	EPA 1010	25.00
Corrosivity (pH)	EPA 1110	10.00
Cyanide, Reactive	EPA 335.2/7.3.3.2	30.00
Sulfide, Reactive	EPA 376.1/9030A/7.3.4.2	30.00
Paint Filter Test	EPA 9095	10.00
TCLP- Lead only	EPA 1311	60.00
TCLP- Metals(8)	EPA 1311	90.00
TCLP- VOC	EPA 1311	125.00
TCLP- Benzene Only	EPA 1311	110.00
TCLP- SVOC	EPA 1311	165.00
TCLP- VOA, SVOC	EPA 1311	280.00
TCLP- Metals, VOC	EPA 1311	210.00
TCLP- Metals, VOC, SVOC	EPA 1311	375.00
FULL TCLP w/Pests/Herbs	EPA 1311	650.00

ENVision

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Fractionation (NWTPH-Gx and NWTPH-Dx)

Parameter

VPH+EPH+Indicator Compounds	$450
VPH+EPH	$350
VPH+Indicator Compounds	$105
VPH	$80
EPH+Indicator Compounds	$310
EPH	$270

IN5035-M Supplies

TerraCore Sampler	**$1.75 each**
Tared Vials	**$0.85 each**
EN Core Sampler	**$8.00 each**

QA/QC Packages – includes hardcopy and CD version

Level II QA/QC NO CHARGE
Level III QA/QC 10%
Level IV QA/QC 15%

Please call for rush TAT pricing.

ENVision offers fast, flexible, responsive service with NO hidden charges or fees (i.e. no extra charge for sample prep, digestion, or disposal)

Need a test you don't see on the list?
Please call us – 317.351.8632.

www.envisionlaboratories.com

KERAMIDA PRICE LIST

RCRA Characteristics

Full TCLP(Metals,Voc,Svoc,Pest,Herb)	$	600
TCLP Metals/VOA/SVOA	$	410
TCLP Metals Only	$	110
TCLP Volatiles	$	140
TCLP/SPLP/Neutral Extraction Only	$	43
Ignitability/Flashpoint	$	25
Paint Filter Test	$	15
pH	$	10
Reactive Cyanide	$	25
Reactive Sulfide	$	30

INORGANICS

General Chemistry

Acidity	$	10
Alkalinity	$	10
Ammonia-CWA	$	25
Ammonia	$	15
BOD	$	15
BTU	$	40
Chloride (lachate or IC)	$	15
COD	$	18
Cyanide (Total)	$	25
Fluoride by IC	$	15
Fluoride by ISE	$	25
Hardness	$	10
Hexavalent Chromium (9176A-Water)	$	20
Hexavalent Chromium (Alk Digest-Soil)	$	75
Nitrate/Nitrite	$	15
Oil & Grease (1664A)	$	40
Phosphorus	$	20
Specific Conductance	$	10
Sulfate (lachat or IC)	$	15
Sulfide	$	15
Total Dissolved Solids	$	15
Total Kjeldahl Nitrogen	$	25
Total Solids	$	7.50
Total Suspended Solids	$	12

Metals

ICP (6010B-per metal)	$	7
ICP/MS (6020-per metal)	$	9
Mercury (1631)	$	80
Mercury (7470A-CVAA)	$	18
Trace ICP (6010B-per metal)	$	7
GFAA (7000's-per metal)	$	25
RCRA 8 metals (Total)	$	67

ORGANICS

GC/MS

Volatiles (8260B)	$	75
Volatiles (Appendix IX)	$	145
BTEX/MTBE (8260B)	$	53
Semi-Volatiles (8270C)	$	150
Semi-Volatiles (Appendix IX)	$	250
PNA 8270C (Ion Trap)**	$	90
PNA 8270C (SIM)	$	100

GC/ECD or GC/NPD

Pesticides (8081)	$	110
Herbicides (8151A)	$	145
PCB (Water-8082)	$	75
PCB (Solid/Chips/Wipes-8082)	$	65
PCB (Oil-8082)	$	55
PCB/Pesticides (608/8081)	$	150

GC/FID

TPH - GRO (8015-Purge and Trap)	$	43
TPH - DRO (8015-ASE Extraction)	$	43
TPH-ERO	$	43

Gas Cylinder Identification

IR/MS/GC	$	300

HPLC

PNA (8310)	$	100
Explosives (8330)	$	180

Miscellaneous Organics

Phenols (9066)	$	20
TOC (Water - 415.1/9060)	$	20
TOX (9020B)	$	80
Total Halogens(XRF)	$	65

Miscellaneous Charges

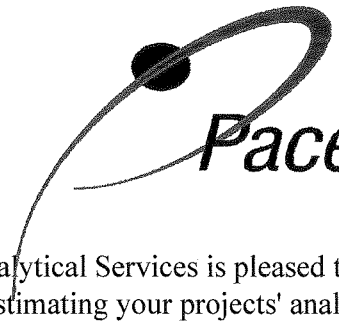
Standard TAT 14 days	
RUSH TAT-24-48 hrs	100%
RUSH TAT 72 hrs	50%
RUSH TAT 4-7 days	25%

Quality Control

Level III	10%
Level IV	15%

All coolers, bottles, preservatives, labels, and pick up from KEI office is included
There are no additional charges for MS/MSD or Trip Blanks
** Preferred Method: PNA 8270 Ion Trap can achieve low detection limits equivalent to 8310 and 8270 SIM

Pace Analytical 2006 Pricing Information
Generic Client Fee Schedule



Pace Analytical® CONFIDENTIAL

Pace Analytical Services is pleased to present our client Price list. We believe it will serve as a useful tool in estimating your projects' analytical costs. However, we encourage you to contact Pace Analytical directly for each individual project. Considering all aspects of your project, our marketing, project management, and technical personnel can provide you with a cost effective quotation based on your specific project scope and the appropriate analytical protocol. In addition, we will work with you to define and understand your expectations prior to the start of the project. During the course of your project, we will monitor the lab activities and provide feedback to you. It is our belief that diligent project setup, good communication, and attentive maintenance activities will ensure the success of your project.

The Pace Analytical nationwide system of laboratories offers quality technical data delivered on time with exceptional client service. Pace Analytical continues to be actively engaged in the evolution of the environmental industry by investing both time and money into our people, instrumentation, and quality control measures. Our philosophy at Pace Analytical, as it has always been, is to provide clients with the standards of service they require and deserve. It is a philosophy dedicated to providing:

Uncompromising Quality

Service Responsive to Client's Needs

A Single Source of Comprehensive Services

Prices for Standard Services Include:

a) Overnight return shipping for shipments containing >$300 of samples to Pace

b) Free pickup via Pace Courier if within Indianapolis and Cincinnati Metro Area

b) Containers, preservatives, coolers, labels, chain-of-custody forms

c) Standard Electronic Deliverables via disk or email

Prices for Specialty Services are shaded and may require special considerations when bidding (shipping, media, TAT, rentals, etc.) Please contact your Pace Representative.

Additional discounts are available for large projects or extended contracts.

Effective until December 31, 2007

ORGANICS		Price
Gas Chromatography / Mass Spectrometry		
Volatile Organic Compounds (VOCs)	EPA 8260	$67.50
BTEX/MTBE	EPA 8260	$35
BTEX/MTBE/Naphthalene/N-Hexane	EPA 8260	$45
Terracore Kits (for VOC sampling)	EPA 5035	$12
Semivolatiles Organics (full list SVOCs)	EPA 8270	$140
Polynuclear Aromatic Hydrocarbons (PAH) (low level, water)	EPA 8270SIM	$85
Polynuclear Aromatic Hydrocarbons (PAH) (low level, soil)	EPA 8270SIM	$85
Semivolatiles Organics (full list SVOCs + PAH, low level)	EPA 8270/8270SIM	$190
Gas Chromatography (GC)		
Organochlorine Pesticides	EPA 8081	$120
Organophosphorous Pesticides (Subcontracted within Pace)	EPA 8141	$120
Polychlorinated Biphenyls (PCBs)	EPA 8082	$65
Herbicides (subcontracted within Pace)	EPA 8151	$190

PETROLEUM HYDROCARBONS / UST ANALYSES		Price
BTEX/MTBE	EPA 8021	$30
Gasoline Range Organics (TPH-GRO)	EPA 8015M	$20
Gasoline Range Organics - Ohio (TPH-GRO-OH) [C6-C12]	EPA 8015M	$35
Diesel Range Organics (TPH-DRO)	EPA 8015M	$32
Tennessee - EPH (TN-EPH) [C12-C40]	TN-EPH	$75
Extended Range Organics (TPH-ERO)	EPA 8015M	$40
TPH Fractionation EPH	WA MTCA	$180
TPH Fractionation VPH	WA MTCA	$78
Methane, Ethane, Ethene (Subcontracted within Pace)	SM3810	$100
Total Oil & Grease		
Hexane extractable material (Subcontracted within Pace)	EPA 1664	$65

RCRA HAZARDOUS WASTE		Price
Corrosivity (pH)	EPA 9045	$10
Reactive Cyanide	EPA 7.3.3.2	$40
Reactive Sulfide	EPA 7.3.4.2	$40
Ignitability of Solids	EPA 1030	$50
Ignitability/Flashpoint (closed-cup)	EPA 1010	$50
Paint Filter Liquids Test	EPA 9095	$15
VOCs - Wastewater	EPA 624	$120
SVOCs - Wastewater (Subcontracted within Pace)	EPA 625	$225
Pesticides / PCBs - Wastewater (Subcontracted within Pace)	EPA 608	$130
TCLP Lead only (includes leachate)	EPA 1311/6010	$75
TCLP RCRA Metals (includes leachate)	EPA 1311/6010/7470	$125
TCLP Benzene (includes leachate)	EPA 1311/8260	$125
TCLP Volatiles (includes leachate)	EPA 1311/8260	$175
TCLP Semi-Volatiles (includes leachate)	EPA 1311/8270	$200
TCLP Metals & Volatiles (includes leachate)	EPA Methods	$275
TCLP Metals, Volatiles, Semi-Volatiles (includes leachate)	EPA Methods	$450
Full TCLP w/ Pests & Herbs (includes leachate)	EPA Methods	$650

METALS — Price

INDIVIDUAL METALS by ICP (Inductively Coupled Plasma) EPA 6010B/ 200.7

Metal Analysis (First Metal)		$12
Each Additional Metal		$8

Aluminum (Al)	Cobalt (Co)	Selenium (Se)
Antimony (Sb)	Copper (Cu)	Silicon (Si)
Arsenic (As)	Iron (Fe)	Silver (Ag)
Barium (Ba)	Lead (Pb)	Sodium (Na)
Beryllium (Be)	Magnesium (Mg)	Tin (Sn)
Boron (B)	Manganese (Mn)	Thallium (Tl)
Cadmium (Cd)	Molybdenum (Mo)	Titanium (Ti)
Calcium (Ca)	Nickel (Ni)	Vanadium (V)
Chromium, total (Cr)	Potassium (K)	Zinc (Zn)

Hexavalent Chromium (Cr VI), water	SW 7196, SM4500-Cr-D	$25
Hexavalent Chromium (Cr VI), soil	SW 7196, SM4500-Cr-D	$60
Mercury (Hg)	EPA 7470A/7471	$25
Mercury (Hg), Low Level (Subcontracted within Pace)	EPA 1631	$150
Metals Wipes (one metal)	SW-846 - 6010	$20
each additional metal	SW-846 - 6010	$7

Package Metals

Priority Pollutant Metals -Soils (13) (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	EPA 6010B/7471	$120
Priority Pollutant Metals - Waters (13) - Tl by GFAA	EPA 6010B/7470/7841	$145
RCRA Metals (8) (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	EPA 6010B/7470-7471	$75
TAL Metals (23) (Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Hg, Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn)	EPA 6010B/7470	$175
Graphite Furnace Analysis (Price each As, Pb, Sb, Se, Tl - waters only)	EPA 7000 Series	$25

DRINKING WATER ANALYSES — Price

All analyses are Indiana Drinking Water certified by the Indiana Department of Health

Organics

Volatile Organic Compounds (VOCs)	EPA 524.2	$125

Metals

Antimony (Sb)	EPA 200.9	$30
Arsenic (As)	EPA 200.9	$30
Barium (Ba)	EPA 200.7	$18
Beryllium (Be)	EPA 200.7	$18
Cadmium (Cd)	EPA 200.7	$18
Chromium, Total (Cr)	EPA 200.7	$18
Copper (Cu)	EPA 200.7	$18
Lead (Pb)	EPA 200.9	$30
Mercury (Hg)	EPA 245.1	$30
Nickel (Ni)	EPA 200.7	$18
Selenium (Se)	EPA 200.9	$30
Thallium (Tl)	EPA 200.9	$30

Wet Chemistries

Nitrates (24-hour hold for Drinking Water)	EPA 353.2	$25
Flouride	EPA 340.2	$25
Cyanide	EPA 335.4	$35

WET CHEMISTRY / INORGANIC ANALYSIS	Water		Soil	
Aqueous Wet Chemistries				
Acidity	EPA 305.1	$15	EPA 305.1	$20
Alkalinity	EPA 310.1	$15	EPA 310.1	$20
Biochemical Oxygen Demand (BOD) (Subcontracted) (48-hr Hold)	EPA 405.1	$35		
CBOD (Subcontracted outside Pace) (48-hr Hold)	EPA 405.1	$35		
Chloride	EPA 325.2	$15	EPA 325.2	$20
Chlorine, Total Residual	EPA 330.5	$20		
Chemical Oxygen Demand (COD)	EPA 410.4	$25		
Conductivity (Specific Conductance)	EPA 120.1	$16		
Cyanide, amenable	EPA 335.4	$55	EPA 335.4	$60
Cyanide, free	EPA 9014	$30	EPA 9014	$65
Cyanide, total	EPA 335.4	$30	EPA 335.4	$35
Ferrous Iron (24-hr Hold)	SM3500-Fe-D	$25		
Fluoride	EPA 340.2	$25	EPA 340.2	$30
Hardness, total	EPA 130.2	$15		
Hydrogen Sulfide	SM4500-S	$35		
Nitrogen, Ammonia	EPA 350.1	$20	EPA 350.1-2	$25
Nitrogen, Nitrate (48-hr Hold)	EPA 353.2	$20	EPA 353.2	$25
Nitrogen, Nitrite (48-hr Hold)	EPA 353.2	$20	EPA 353.2	$25
Nitrogen, Nitrate+Nitrite	EPA 353.2	$20	EPA 353.2	$25
Nitrogen, Total Kjeldahl (TKN)	EPA 351.2	$25	EPA 351.2	$30
Oxidation-Reduction Potential (REDOX)			SM2580B	$25
Oxygen, Dissolved	SM4500-D	$15		
pH (24-hr Hold in water)	EPA 150.1	$12	EPA 9045	$17
Phenol (4aap)	EPA 420.2	$30	EPA 420.2	$35
Phosphorus, Ortho	EPA 365.2	$20	EPA 365.2	$25
Phosphorus, Total	EPA 365.2	$30	EPA 365.2	$35
Resistivity			AASHTO-288	$30
Solids, Total (TS)	EPA 160.3	$15		
Solids, Total Dissolved (TDS)	EPA 160.1	$15		
Solids, Total Suspended (TSS)	EPA 160.2	$15		
Sulfate	EPA 375.4	$20	EPA 375.4	$25
Sulfide	EPA 376.2	$20		
Sulfite	EPA 377.1	$20		
TOC (Subcontracted within Pace)	EPA 415.2	$40	EPA 9060M	$60
TOC - Walkley Black (Subcontracted within Pace)			Walk.-Black.	$60
TOX / EOX (Subcontracted outside Pace)	EPA 1650	$160	EPA 1650	$160
Turbidity (48-hr Hold)	EPA 180.1	$15		

***Non-Standard Wet Chemistries may be available on a per project bases. Contact your Pace Representative for details.*

AIR TOXICS		Price

INDUSTRIAL HYGIENE - PERSONAL / PERIMETER MONITORING

Prices include cost of sampling media. Mandatory Method Blanks are considered a billable unit. Contact Pace Project Manager for sampling details.

Metals

Metals in Air (one metal)	NIOSH 7300	$25
each additional metal	NIOSH 7300	$7
Hexavalent Chromium	NIOSH 7600	$45
Mercury	NIOSH 6009	$35
Metals in Air - Hi Volume Sampler (one metal)	40CFR-Pt50 Appendix G	$35
each additional metal	40CFR-Pt50 Appendix G	$10

GC / GCMS Methods

Aromatic Hydrocarbons (BTEX Compounds Only)	NIOSH 1501	$75
PCBs	NIOSH 5503	$90
Vinyl Chloride	NIOSH 1007	$85
VOCs - Passive Monitor Analysis (one compound)	OSHA 07M	$75
each additional VOC compound	OSHA 07M	$15
VOCs - Charcoal Tube Analysis (one compound)	OSHA 07M	$50
each additional VOC compound	OSHA 07M	$15

Particulate Matter

Nuisance Dust	NIOSH 0500	$25
Respirable Dust	NIOSH 0600	$25
PM-10 Emissions	40CFR-Pt50 Appendix J	$25
Total Suspended Particulates	40CFR-Pt50 Appendix K	$25

LANDFILL GAS / AMBIENT AIR METHODS

Landfill Gas: (Price does not include sampling media)

Permanent Gases:Methane, O2, CO2, N2, CO (GC/TCD/FID)	3C	$75
Methane, Ethane, Ethene, Propane (GC/FID)	3810M	$90
Methane only (GC/FID)	3810M	$60

Air Toxics (Ambient Air): (Price does not include sampling media)

Volatile Organic Compounds (BTEX Compounds only) (GC/FID)	TO-3	$60
Organochlorine Pesticides and PCB's (GC/ECD)	TO-4	$185
Pesticides or PCB's separately (GC/ECD)	TO-4	$140
Dioxin & Furan PCDD/PCDF (HRGCMS)	TO-9	$720
Organochlorine Pesticides and PCB's (low vol. sampling/GC/ECD)	TO-10	$180
Pesticides or PCB's separately (low volume sampling/GC/ECD)	TO-10M	$140
Polynuclear Aromatic Hydrocarbons (GC/MS SIM)(need PUF + hi-vol sampler)*	TO-13	$162
Volatile Organic Compounds (standard list-39 cmpds; summa can/bag)(GC/MS)	TO-14	$155
Reduced List 1-5 Analytes ($5 each add'l, up to 15 max)(GC/MS)	TO-14M	$90
Volatile Organic Compounds (expanded list-62 cmpds, summa can) (GC/MS)	TO-15	$170
VOC's Reduced List 1-5 Analytes ($5 each add'l, up to 15 max)(GC/MS)	TO-15M	$104
Ozone Precursors (std list 60 compounds) (GC/FID)	TO-15OP	$194
Ozone Precursors Red. List 1-5 Analytes($5 each add'l to 15 max)(GC/FID)	TO15OPM	$194
Volatile Organic Compounds (SIMS list 16 cmpds) (GC/MS SIM)	TO-15S	$203

Air Toxics		Price

STATIONARY SOURCE TESTING

Stack Air (stationary source): (Price does not include sampling media)

Particulate Matter	5	$14
Lead Emissions	12	$40
Volatile Organic Compounds(GC/MS)	18	$180
Semivolatiles (modified list 60 compounds) (GC/MS)	110	$315
Dioxin & Furan (separate front end rinse value)	0023A	$1,440
Dioxin & Furan PCDD/PCDF (HRGCMS)	23	$720
Metals (12 Elements plus Mercury)	29	$450
Mercury	101	$54
Mercury Speciation in Stack Gas (CVAA)	324	
PM 10 Emissions (requires high volume sampler)*	201A	$14
Condensable Particulate Emissions	202	$36
Hydrogen Halide & Halogen Emissions (price per fraction)	26A	$99
Polynuclear Aromatic Hydrocarbons (GC/MS SIM) (Std 14 compounds)	429	$605

Sampling Media:

6 Liter Summa Canister (one week rental, subject to $50 fee each addtl week)	$36
Individual Canister Certification Process	$68
Flow Control Valve (one week rental, subject to $50 fee each addtl week)	$27
1 Liter Tedlar Bag	$11
PUF Cartridge (includes prespike fee if required)	$36
XAD2 Trap (includes prespike fee)	$54
Impinger	N/C
Impinger Pump Rental	$60
Impinger Replacement	$60
Charcoal Tubes (ORBO 100)	$13
Filter	$5

Biota/Biological Samples

Organochlorine Pesticides (EPA TCL 3.4 List)	8081A	$210
Organochlorine Pesticides and PCBs (Incl TCL 3.4 List & 9 addl Pesticides)	8081M	$342
PCB Aroclors (standard 7 compounds)	8082	$180
PAHs (GC/MS-SIM)	8270C	$235
BNA (EPA TCL List)	8270C	$355
Tentatively Identified Compounds (TICs)	8270C	$63
Lipid Analysis*	Lab SOP	$45
Mercury by CVAA (includes Prep Charge)	7471A	$36
Mercury by CVAA (includes Prep Charge)	245.6	$45
Mercury by Low Level Method	1631	$90
Metals by ICP-MS (each metal)	6020	$16
TAL Metals	6020	$234
AVS/SEM		$315
Moisture Content	Lab SOP	$11
Biota Tissue Homogenization (incl. fish filleting)	Lab SOP	$23
Hantavirus Decontamination (required for all small rodents)	Lab SOP	$135

**Lipid analysis is billable when a separate extraction is required, I.e. as a stand alone procedure or for metals*

DIOXINS/FURANS (and Dioxin-like compounds)		Price
High Resolution Methods		
2,3,7,8-TCDD (Single Compound, Drinking water)	EPA 1613	$293
2,3,7,8-TCDD (Single Compound, other matrices)	EPA 1613	$405
2,3,7,8-TCDD/TCDF (2 Compounds, pulp & paper industry)	EPA 1613	$405
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 1613	$720
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8290	$405
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8290	$720
Tetra-Octa (All 17 Dioxin/Furan compounds by CLP SOW)	DLMO 1.4	$780
Tetra-Octa (Stack Testing, 17 compounds)	Method 23	$720
Tetra-Octa (Ambient Air Testing, 17 compounds)	TO-9	$720
PAHs by HRGCMS (17 Compounds)	EPA 429M	$608
PCB Congeners (WHO List, 12 PCB congeners)	EPA 1668	$575
PCB Congeners (209 PCB congeners and totals))	EPA 1668A	$895
Tetra-Octa & PCBs (Dioxin/Furan/PCB's 29 compounds)	1613-1668	$1,170
PBDE (Brominated Flame Retardants 49 compounds)	EPA 1614	$855
Low Resolution Methods		
Tetra-Hexa (Tetra-Hexa isomers only, Appendix IX)	EPA 8280A	$405
2,3,7,8-TCDD (Single compound, all matrices)	EPA 8280A	$360
Tetra-Octa (All 17 Dioxin/Furan compounds)	EPA 8280A	$450

NOTE: All prices reflect Level II reporting only. TAT is 15 days (20 for 1668A, 1614 and 1613/1668 combination).

Surcharges will apply for alternate report formats and rush TAT upon approval (call for quotation).

RADIOCHEMISTRY / RADIOACTIVITY ANALYSES		Price
Radiochemistry in Drinking Water		
Gross Alpha	EPA 900.0	$45
Gross Beta	EPA 900.0	$45
Gross Alpha/Beta	EPA 900.0	$50
Total Alpha-Emitting Radium Isotopes	EPA 903.0	$67
Radium-226; Radon Emanation	EPA 903.1	$90
Radium-228	EPA 904.0	$81
Radioactive Strontium	EPA 905.0	$90
Tritium	EPA 906.0	$67
Uranium	EPA 908.0	$67
Radon-Liquid Scintillation Method	SM 7500-Rn	$45

Please call for information on additional methods, certifications, hold times, turn around time, data packages, etc.

*Please call your Representative or our Waltz Mill Lab at 724-722-5407 for details on our Radiochemistry Program

OTHER CHARGES		
Composite of Samples		$25/sample
Percent Moisture in soils	ASTM Method	$5/sample
Sample Filtration		$25/sample
Extract and Hold (I.e. SVOCs, Pesticides, Herbicides, etc.)		50% of cost of analysis
Disposal of unanalyzed samples		$20.00/sample+labor
Delivery of Sample Kits (<2 workday notice)		Cost of delivery + 10%
Copy of Chromatogram (if not requested at time of sample submittal)		$50/hour
Retroactive Copy of Chromatogram (minimum one hour)		$50/hour
Data Validation/Technical Reviewal of Data		$50/hour
Minimum Laboratory Order		$50.00

Client specified or project specific MS/MSDs are charged as one billable unit

TURNAROUND TIMES*

Standard (7-10 working business days)	No Surcharge
3 working business days	50% Surcharge
2 working business days	75% Surcharge
1 working business day	100% Surcharge
Less Than One Workday (also weekends and holidays)	Quote

**All turnaround times less than 10 business days MUST be pre-arranged. For other TATs please call and inquire.*

DELIVERABLES/ DATA PACKAGES*

Level 1 — No Surcharge

Sample Data Reporting Only

Level 2 — No Surcharge

Complete Quality Control (QC) Data Blanks, Spikes, duplicates (including batch matrix spike duplicates), laboratory control samples relative percent difference (RPD), percent recovery

Level 3 — 10% Surcharge

Items listed in level 2 and ICAL and CCAL data and summaries, run logs, surrogate recovery summaries, tune summaries, and internal standard summaries

Level 4 — 15% Surcharge

Items listed in level 3 plus raw data for QC (blanks, lcs, ms/msd) and samples

PRICING NOTES

Items included represent services provided by Pace Analytical. Numerous additional services and certifications are available throughout our nationwide network of labs. The prices shown are for routine projects with standard turnaround times. Specific projects may be bid individually. These prices should be used as guidelines, as exact pricing will depend on project size and expected turnaround time. Please consult Pace Analytical for assistance.

- EPA or other approved methods will be used for all analyses.
- Laboratory prices include:
  a. The supply of appropriate sample containers and preservatives.
  b. Shipping of the sample containers and coolers to the client using standard UPS or equivalent service. Express charges will be billed back to the client.
  c. Normal laboratory QA/QC protocol. Additional levels of QA/QC are available as presented above. Please consult Pace Analytical for details.
- Pace Analytical will dispose of all non-hazardous samples. Pace Analytical reserves the right to return to the client any highly hazardous, acutely toxic, or radioactive samples and sample containers.
- The Client is responsible for informing Pace of any necessary certifications, reporting limits and or methods at the time of initial project set-up.
- Pace Analytical reserves the right to subcontract any method listed with prior consent of the Client

GENERAL INFORMATION

ADDRESS: **Pace Analytical Services, Inc.**
7726 Moller Road
Indianapolis, IN 46268

LOCATION: **Northwest Indy, off 465W/86th Street exit**

PHONE: **317-875-5894**

FAX: **317-872-6189**

BUSINESS HOURS: **8am - 5pm**

SAMPLE RECEIVING HOURS: 8am - 6pm M - F; 9am-Noon Sat.

***Arrangements can be made for after hours drop-off times with prior notification. Please contact your Pace representative for alternate drop off options**

Account Executive: **Account Executive, 317-432-5511 kris.buckles@pacelabs.com**
Project Manager: **Drew Votaw, 317-875-5894 ext 105 andrew.votaw@pacelabs.com**

Pace Analytical Services, Inc. Terms and Conditions

1. **Controlling Provisions** - These Standard Terms and Conditions are an integral part of the Agreement between Pace Analytical Services, Inc. ("PASI") and CLIENT ("Client"), and supersede any other document provisions not consistent herewith. Further, the Agreement, including these Terms, constitutes the entire agreement between PASI and Client relating to the project and any written or oral representations, assurances, commitments, premises, or agreements by PASI not contained herein are void.

2. PASI General Responsibilities - Performance by PASI shall meet current reasonable scientific and engineering standards in effect in the industry at the time the service is performed. Tests and observations will be conducted using test procedures and laboratory protocols as specified in accepted task orders, Scope of Work, proposals prepared by PASI or written instructions to PASI from Client. If Client directs a manner of performing analyses that varies from PASI's standard or recommended methods and procedures, Client agrees to hold PASI harmless from all claims, damages, and expenses arising out of Client's direction.

3. Reports and Records - PASI will provide copies of each report to Client as specified in the task order or PASI proposal. PASI will retain final reports in a retrievable manner for five years from the date of issuance, and will retain back up data for those reports for a minimum of one year and a maximum of three years. PASI agrees to provide reports for Client's use only for purposes disclosed to PASI at the time of contracting. If Client does not pay for PASI's services as agreed, Client agrees that PASI may retain all reports and work not yet delivered to Client and request the return of the original reports issued. Methods, discoveries, procedures, and equipment developed by PASI during or for the project shall remain the sole property of PASI.

4. Delivery and Acceptance of Samples - Client will notify PASI of upcoming work at least ten working days prior to delivery of the samples. PASI can accept or refuse the work within two days thereafter. Client is responsible for loss of or damage to samples until PASI accepts delivery of samples by notation on chain of custody documents. PASI reserves the right to transfer samples within our laboratory system, after prior notification to Client. Such transfers will be made only to PASI laboratories which meet certification and/or approval requirements defined by client. In the event Client chooses to restrict the transfer of samples between PASI laboratories, PASI will not be responsible for the payment of penalties, fines, resampling or reanalysis charges. PASI reserves the right to charge for sample containers that are provided yet unused by the client or received by PASI and unanalyzed at the request of the Client.

5. Sample Retention and Disposal – PASI will dispose of all non-hazardous samples. It is the responsibility of the Client to inform PASI should it be desired that non-hazardous waste samples or extracts be saved beyond 30 days after the issuance of the final report or if alternative or special disposal methods are desired. PASI reserves the right to charge for storage of any sample(s) or extract(s) stored beyond 30 days after the date of the final report or for any disposal costs incurred. PASI reserves the right to return highly hazardous, acutely toxic, or radioactive samples and sample containers and residues to Client. In addition, samples containing analytes for which there is no approved method of disposal may also be returned to Client. Client agrees to accept them.

6. Non-Assignment - Neither party may assign or transfer any rights or obligations existing under the Agreement without prior written consent of the other party; provided, however, that PASI may distribute the project within its system of laboratories or may subcontract such part or parts of the project as PASI may deem appropriate.

7. Time of Completion - Force Majeure - PASI shall use its best efforts to accomplish the project within any specified time limitations. PASI shall not be responsible for any non-performance or delay in the work to be performed caused by Client, Client's employee, agents or contractors, or caused by factors beyond PASI's control such as governmental authorities, unanticipated physical conditions not now known, labor disputes or acts of God.

8. Successors and Assigns - The Terms shall be binding upon, and inure to the benefit of the successors and assignee of Client and PASI.

9. Compensation - The pricing offered to Client by PASI is predicated upon Client's acceptance of this Agreement. In most cases, the pricing includes all sample containers and preservatives as prescribed by the analytical method requested for each determination. Credit worthiness will be determined based upon an assessment of Client's payment history, credit reports, financial stability or other factors. If credit is not granted, Client must pay PASI in advance prior to initiation of the project. In the event that PASI is serving as a subcontractor for Client, PASI will be informed, upon request, of the identity of the ultimate client and may make inquiries of the ultimate client prior to granting credit.

Client agrees to pay for services as stated in the PASI proposal or price quote as accepted by Client. Invoices are due 30 days from the date of the invoice. Within 15 days from receipt of invoice, client will notify PASI in writing of any particular item that is alleged to be incorrect. Uncontested portions of the invoices will be due within 30 days from initial invoice date. Interest will be charged on unpaid balances at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law, beginning 30 days after receipt of invoice. PASI may choose to invoice a third party if requested by Client, however, Client agrees to be ultimately responsible for payment until PASI is provided with that third party's written acceptance of all terms of the Agreement and until PASI agrees to a substitution.

In the event that payment is not made within 60 days following the invoice date, PASI will consider the default a total breach of the Agreement and may terminate all duties without liability to Client or to others. In the event that PASI must take action to collect payment, Client shall pay all costs of collection, including attorney's fees. Any significant changes to the scope of work subsequent to the submittal of a price quotation, or the delivery of samples to the laboratory are subject to a renegotiation of prices or terms relating to the original scope of work. Such changes include, but are not limited to: QA/QC requirements and procedures, detection limits, samples received and stored, but not analyzed, decrease in quantity of samples delivered compared to quantity quoted, reporting and other deliverable format requirements. PASI shall not be required to comply with such changes unless requested in writing and agreed upon by PASI in writing.

10. Risk Allocation, Disputes, and Damages - PASI's aggregate liability for negligent acts and omissions and of a non-intentional breach by PASI will not exceed the fee paid for the services. Client agrees to indemnify PASI from all liabilities to others in excess of that amount. The limitation does not apply to losses arising from gross negligence or intentional breaches of contract by PASI. Neither PASI nor Client will be liable to the other for special, incidental, consequential, or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital. PASI will not be liable to Client unless Client has notified PASI of the discovery of the claimed negligent act, error, omission or breach within 30 days of the date of its discovery, and within two years of the date of injury or loss, and unless PASI is given an opportunity to investigate and to recommend ways of mitigating Client's damages. If it is claimed by a third party that PASI did not complete an acceptable analysis, Client will seek further review and acceptance of the completed work by the third party and use their best efforts to obtain that acceptance. Subject to an overall limitation of liability provided for in this Agreement, if PASI has failed to meet an established holding time through negligence or non-intentional breach, PASI will be responsible for the actual costs of resampling and reanalysis, but not exceeding the value of the individual task order or proposal.

11. Client Responsibility – Client shall:

(a) Provide PASI full and complete information regarding all factors known to Client, or which Client has access to, which could have any affect on the ability of PASI to perform its obligations, and notify PASI should Client acquire information of this type during performance of the project.

(b) Provide to PASI personnel and/or subcontractors access to any site where PASI is to perform work, and access to all personnel of Client who are in any way involved in the project, including (but not limited to) any authority or permission which must be obtained by any third party.

(c) Notify PASI of any delay regarding the start-up, progress or completion of the project caused by Client, or caused by others and known to Client, not less than two (2) weeks before such delay. In the event that Client fails to give the notice required by the Paragraph, Client agrees to pay PASI for labor and material, and for lost profits due to PASI being unable to work elsewhere during the period of delay.

12. Indemnities - PASI will indemnify and hold Client harmless from and against demands, damages, and expenses caused by negligent acts and omissions and breaches of contract by PASI and by the negligent acts and omissions and breach of contract of persons for whom PASI is legally responsible. Client will likewise indemnify and hold PASI harmless.

13. Insurance - PASI carries liability insurance with limits as follows: General liability - $2,000,000 general aggregate, each occurrence $1,000,000; personal and advertising injury $1,000,000; Automobile Liability - $1,000,000; Excess Liability Umbrella - $5,000,000 aggregate, $5,000,000 each occurrence; Worker's Compensation Insurance - with statutory limits; Professional Liability $5,000,000 aggregate, $5,000,000 per claim. PASI will, at Client's request, submit certificates of insurance from insurers showing limits of coverage.

14. Change Orders - PASI shall not be required to comply with any requested changes in the project unless agreed to by PASI in writing. Any changes may increase the amount due PASI.

15. Confidentiality - Each party agrees that if during the performance of the project it becomes aware of trade secrets, confidential or proprietary information of the other, it will not disclose except to its employees or contractors and then only as necessary to complete the project.

16. Liability Limited - Client is aware that the project may involve inherent risks, both patent and latent, and that PASI cannot guarantee satisfactory results or indemnify Client from any damages, direct or indirect, resulting from the project. Should it be determined by a Court of competent jurisdiction that PASI did not meet current reasonable scientific regulatory and engineering standards in effect in the industry at the time the service is performed, and if Client suffers damages directly as a result thereof, PASI liability is limited to the amount of the project cost. PASI shall not be responsible for any consequential or indirect damages in any amount. If Client desires any alteration of the limitation of PASI liability provided for in the Paragraph, it shall so advise PASI in writing prior to commencement by PASI of work on the project and agree to pay for the cost of any additional insurance PASI may agree to purchase to cover such liability. PASI shall not be required to undertake the project if it cannot, in PASI's opinion, adequately cover its exposure by insurance. Client will advise its agents, contractors and subcontractors involved in the project, if any, of the liability limitation.

17. Miscellaneous Provisions - PASI requests written acceptance of these terms and conditions, however, the arrival of samples at a PASI laboratory will be considered an intent to do business and constitute agreement to these Terms and Conditions.This Agreement constitutes the summary of terms and conditions between Client and PASI. In no event will the printed terms or conditions stated in a purchase order, other than agreed upon task order, be considered part of this Agreement. These terms shall be governed by the laws of the State of Minnesota.

ATTACHMENT 4

Table 1
Environmental Consulting Services Unit Cost Summary
Indiana Finance Authority Request for Qualifications
November 2006

Cost Item	Description	Cost Per PRGI Administrative Region						
		Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7
a	Removal of tanks, piping, dispensers <5,000 gallons[1][2]	$2,474	$2,474	$2,474	$2,474	$2,474	$2,474	$2,474
b	Removal of tanks, piping, dispensers >5,000 gallons[1][2][3]	$4,510	$4,510	$4,510	$4,510	$4,510	$4,510	$4,510
c	Petroleum impacted soil disposal (excavate, trucking, and landfill) per ton[2][4]	$48.80	$38.35	$38.35	$38.35	$38.35	$51.25	$43.75
d1	Petroleum impacted tank contents dispsoal per gallon (labor, trucking)[5]	$0.75	$0.75	$0.75	$0.75	$0.75	$0.75	$0.75
d2	Petroleum impacted tank contents disposal per drum (labor, trucking)	$314	$314	$314	$314	$314	$314	$314
e1	Solid waste disposal per ton (concrete, asphalt)	$13.25	$13.25	$13.25	$13.25	$13.25	$13.25	$13.25
e2	Solid waste disposal per ton (general refuse)	$22	$22	$22	$22	$22	$22	$22
f	Geoprobe cost per day (operator included)[2]	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200	$1,200
g	Monitoring well installation per IDNR regulations for wells - 20ft to 30ft[2][6]	$1,573	$1,573	$1,573	$1,573	$1,573	$1,573	$1,573
h1	Monitoring well installation per IDNR regulations for wells - <20ft[2][6]	$1,166	$1,166	$1,166	$1,166	$1,166	$1,166	$1,166
h2	Monitoring well installation per IDNR regulations for wells - <20ft[2][7]	$740	$740	$740	$740	$740	$740	$740
i	Monitoring well installation per IDNR regulations for wells - 31ft to 45ft[2][6]	$2,211	$2,211	$2,211	$2,211	$2,211	$2,211	$2,211
j	Monitoring well installation per IDNR regulations for wells - 46ft to 60ft[2][6]	$3,190	$3,190	$3,190	$3,190	$3,190	$3,190	$3,190
k	Backfill and trucking per ton[8]	$12.05	$8	$8	$8	$8	$12.65	$9.45
l	Labor cost per hour (general labor, See Table 2 for professional fee rates)	$50	$50	$50	$50	$50	$50	$50
m	Miscellaneous equipment rental list	Refer to Table 3						
n	Site identification activities[9]	$75	$75	$75	$75	$75	$75	$75
o	KERAMIDA professional unit fee schedule	Refer to Table 2						

Notes: Cost items not included on this summary table will be billed in general accordance with the Excess Liability Trust Fund guidelines

All pricing is subject to reasonable fuel adjustments for the duration of the contract

PRGI = Petroleum Remediation Grant Initiative

INDR = Indiana Department of Natural Resources

[1] Assumes tanks are empty.

[2] Does not include mobilization costs, mobilization cost will be billed in general accordance with the Excess Liability Trust Fund guidelines.

[3] Assumes the maximum tank size is 12,000 gallons or less, which is generally the maximum tank size for a typical gas station.

[4] Based on 400 tons of impacted material and a 1-hour turn time to the landfill, costs may vary for different volumes and further distances.

[5] Based on 500 gallon minimum.

[6] Assumes 2-inch diameter, Schedule 40 PVC wells with 10 feet of 10-slot screen.

[7] Assumes ≤1-inch diameter pre-packed wells with 10 feet of screen. The installation of pre-packed wells is not possible in certain geologic conditions due limitations of push-probe machinery.

[8] Assumes general fill available with 1/2 hour turn, costs may vary for further distances.

[9] Rate to be charged for all technical professional classifications. Primary personnel to include Andrew Gremos, Ann Luther, and Frank West. Clerical fees will be billed at $30 per hour.

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1-800-508-8034
keramida@keramida.com • www.keramida.com

Table 2
KERAMIDA Professional Unit Fee Schedule
Indiana Finance Authority Request for Qualifications
November 2006

Professional Classification	Hourly Rate
Site Identification Activities	$75.00[(1)]
Senior Technical Advisor	$150.00
Principal-in-Charge	$110.00
Toxicologist	$125.00
Senior Project Manager	$102.00
Senior Project Geologist	$102.00
Senior Project Engineer	$102.00
Project Manager	$83.00
Project Geologist	$83.00
Project Engineer	$83.00
Staff Scientist	$70.00
Staff Geologist	$70.00
Staff Engineer	$70.00
Other Staff Project Persons	$70.00
Field/Site Manager	$70.00
Senior Field Technician	$55.00
Field Technician	$40.00
Drafting Person	$40.00
Clerical	$30.00

[(1)] Rate to be charged for all technical professional classifications
Overtime - No overtime charges for work beyond an 8-hour day, on weekday. Any field work completed on the weekend will be billed at 2x hourly rate.

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Table 3
KERAMIDA Equipment Rental Rates
Indiana Finance Authority Request for Qualifications
November 2006

DESCRIPTION	DAILY RATE (or as otherwise shown)
General Equipment/Expenses	
Field Vehicles (including 4-wheel drive capacity)	$40.00
Mileage	$0.375/mile
Site Mobilization	$50.00
Mobilization/Equipment	$10.00
Level A Protection	*
Level B Protection (include clothing)	$160.00
Level C Protection (include clothing)	$65.00
Tyvek® Suit (/suit)	$20.00
Saran Suit (/suit)	$30.00
Acid Suit (/suit)	$85.00
Daily Sampling Package	$50.00
Bomb Sampler	$50.00
Coliwasa (each)	$15.00
Survey Kit	$50.00
Core Drill	$140.00
Power Tools	$35.00
Metal Detector	$30.00
Field Cameras	$5.00
Locks (each)	$5.00
55-Gallon DOT Open-Top Drum (/drum)	$34.00
Soil/Sludge	
Hand Auger	$30.00
Sludge Sampler	$20.00
JMC Subsoil Probe	$75.00
JMC Probe Liners	$6.00
Geoprobe® Expenses	
Geoprobe® (with operator)	$1,2000.00
Geoprobe® (with operator) Half Day	$600.00
Geoprobe Hourly Rate	$125
Mob/Demob (Marion & Surrounding Co.)	Included
Mob/Demob (Outside Marion & Surrounding Co.)	$300
Bentonite (/bag)	$9.75
Quartz Sand (/bag)	$6.00
Sample Liners	$1.00/ft
Pre-Packed Well Screen (5' Length)	$80 + Material Cost
1" PVC Riser Pipe (5' Section)	$9.00
1" PVC Screen (5' Section)	$14.50
1" PVC Screen Pt	$7.50
1.25" Expendable Drive Points (/point)	$6.00
3.25" Expendable Drive Points (/point)	$11.00

*Cost to be determined on a case-by-case basis.

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Equipment Rental Rates (Continued)

Water	
Hydrolab	$100.00
Micropurge System	$115.00
Micropurge Bladder (/bladder)	$7.00
Interface Probe	$55.00
Electronic H_2O Level Meters	$20.00
Field Meters such as D.O., pH, Conductivity, etc. (/meter)	$30.00
Stormwater Kits	$385.00
ISCO Sampler	$100.00
Peristaltic Pump	$30.00
Monitoring Purge Pump	$15.00
1.6" Disposable Bailers (/bailer)	$7.00
¼" Polyethylene Tubing	$0.10/ft
3/16" Silicone Tubing	$1.25/ft
Field Test Kits, Fe+2, H2S, etc. (/test)	$5.00
Water Filter (/filter)	$15.00
Air	
OVM Meters	$85.00
Micro FID Meters	$100.00
Gastech LEL Meters	$100.00
Air Driven Bailers	$65.00
Ambient Air Pumps	$35.00
Indoor Air Quality Monitor	$60.00
Protimeter Moisture Meter #1 & #2 (/meter)	$25.00
Protimeter Hygrohawk	$40.00
Smoke Tube Kit	$125.00
Anderson Sampler	$40.00
Anemometer	$25.00
EXOTOX Meter	$50.00
Drager® Pump	$25.00
Personal Air Pumps	$20.00
High Volume Air Pump	$25.00
Air Pump Calibration Kit	$20.00
Wallcheck Kit/Sampler	$40.00
Air-O-Cell Cassette	$12.00
Bioaerosol Impactor	$70.00
Summa Canisters	*
Teflon® Tubing (Soil/Gas Sampling)	$1.60/ft
Magnehelic Gauge Set	$20.00

*Cost to be determined on a case-by-case basis.

ATTACHMENT 5

SOIL EXCAVATION AND DISPOSAL

KERAMIDA PROJECT EXPERIENCE
SOIL EXCAVATION & DISPOSAL

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Soil Excavation and Disposal	Status Letter	Conducted geophysical survey to locate USTs. Residential redevelopment of Site has been completed.
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Soil Excavation and Disposal	Status Letter	Residential redevelopment of Site has been initiated.
West	Former Service Station	4	Gasoline, diesel, waste oil	Soil and Groundwater	LUST	Soil Excavation and disposal	In Process	UST removal.
Sargent	Former Gas Station	5	TPH; BTEX	Soil; groundwater	LUST	Soil Excavation and Disposal	In Process	Conducted vapor intrusion screening and modeling; and indoor air sampling.
Sargent	Former Service Station	5	Petroleum Fuels, Waste Oils	Soil and Groundwater	LUST	Soil Excavation and Disposal, Groundwater Extraction and Treatment, Monitored Natural Attenuation / Risk Analysis	In Process	Complex site involving intrusion of petroleum vapors into neighboring residences. Some neighbors were evacuated. Detailed soil vapor intrusion assessment completed. Used sewer camera to determine pathways of clay tiles and sewer lines on and off-site, which were conduits that spread the contamination in the soil. Station building and adjacent residence demolished and former basements pumped and removed. Soil remediation was complete through excavation with disposal at a landfill. Groundwater contamination completed through focused pump and treat and plume stability monitoring under RISC. Off-site impacts under alley way closed using risk-based evaluation. No further action request submitted.
Sargent	Former Service Station	4	Gasoline	Soil and Groundwater	LUST	Soil Excavation and disposal	NFA Letter	Removed two USTs and product lines. Overexcavation with disposal at a landfill to complete the soil remediation. Grounwater monitored for one year, contamiation below cleanup goals.
Sargent	Former Service Station and Art Foundry	4	Petroleum Fuels/Waste, Foundry Wastes	Soil	BROWNFIELDS	Soil Excavation and disposal	Status Letter	Used a geophysical survey to find three USTs. Removed USTs and an oil/water separator. Delineated petroleum and heavy metals contamination with push-probe. Foundry soils excavated and disposed of at a hazardous wasted landfill.
Sargent	Former Limestone Quarry and Asphalt Plant Operation	3	Petroleum Fuels, Hydraulic & Motor Oils	Soil	STATE CLEANUP, BROWNFIELDS	Soil Excavation and disposal	NFA Letter	A 500 acre inactive limestone quarry, which operated from 1917 to the 1970s. Small asphalt plant operated on the Site during the 1980s. Investigation include - Phase I, Phase II, Geophysical Survey, Exploratory Trenching, Surface water and sediment, Arsenic in Soil Background Investigation, Archaeological Survey, Asbestos Survey, Wetlands Determination, and Endangered Species Survey. Significant historical research conducted. 74 investigative borings completed. Removed four USTs. 472 tons of impacted material excavated and disposed from various areas. In addition to soil excavation for remediation, an Environmental Restrictive Covenant was used as an institutional control to limit exposure for contamination left in-place. Property was turned into DePauw Park.
Sargent	Shopping Mall, Emergency Generator UST	4	Diesel Fuel	Soil	STATE CLEANUP	Soil Excavation and disposal	NFA Letter	Removal of a 500 gallon UST associated with an emergency generator. Overexcavation of impacted soil.
Sargent	Shopping Mall, Former Auto Service Center	5	Waste & Virgin Petroleum Products	Soil and Groundwater	LUST	Soil Excavation and disposal	NFA Letter	Push-probe investigation. Removal of hydrualic lifts and oil water separator. Excavation of impacted soil and disposal of pit water. Installation of monitoring wells with one year of monitoring.
Sargent	DNR Fish Hatchery	2	BTEX/MTBE	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis, Soil Excavation and Disposal	NFA Letter	Soil excavation with and confirmation sampling and monitored natural attenuation for the groundwater.

KERAMIDA PROJECT EXPERIENCE
SOIL EXCAVATION & DISPOSAL

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Sargent	Shopping Mall, Former Auto Service Center	2	TPH	Soil	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Removal of a wasted oil UST, eight hydraulic lifts, and an oil/water separator. Over excavation of impacted soil and confirmation sampling.
Sargent	Manufacturer of cell phone housings	2	TPH, Metals	Soil	RCRA	Soil Excavation and Disposal	NFA Letter	Compressor oil impact (TPH) to the surface soils and over flow of soap based parts washer (silver and copper contamination). IDEM enforcement action. Excavation and disposal and confirmation sampling.
Sargent	Former Service Station	2	TPH, BTEX/MTBE	Soil and Groundwater	LUST	Soil Excavation and Disposal	In Process	Historic gas station building. Approved CAP. Excavation of over 1,300 tons of impacted soil and confirmation sampling. Installation of a monitoring well network and quarterly sampling.
Harrington	Former Tractor Trailer Repair Center	1	Diesel Fuel	Soil and Groundwater	LUST	In-situ Biological Treatment Soil Excavation and Disposal	NFA Letter	Petroleum impacts identified during removal of two diesel USTs. Impacted soils removed. Nutrients and microbes introduced to subsurface to enhance bio-remediation of residual contamination.
Harrington	Former Municipal Airport	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Investigated a former airport consisting of 160 acres. Completed soil and groundwater remediation in a former UST cavity and hangar areas by excavation and off-Site disposal of over 5,000 tons of soil.
Harrington	Pharmaceutical Plant	1	Petroleum related COC including TPH, PAHs, and PCBs	Soil, Groundwater, and Concrete	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Investigated and delineated COC occurrence at former boiler house/maintenance facility. Completed soil remediation by excavation and off-Site disposal.
Harrington	Manufacturing Facility	7	Hydraulic and Cutting Oils, PCBs and metals	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal, Free Product Removal, Human Health & Ecological Risk Assessment	In Process	The Site consists of a 250,000 square foot manufacturing facility located on approximately 49 acres of land. Competed a Site-wide remedial investigation consisting 87 soil borings, a geophysical survey, installation of monitoring wells, sampling of wells, sediment and surface water sampling, and a Site-specific evaluation of TPH occurrence. Site-specific TPH cleanup goals were established using the June 2006 RISC Guidance. Product-typing was also performed to determine the nature and age of the free product. Investigation results identified areas above and below the non-default Site-specific TPH closure levels. Proposed remedial strategy is installation of a free product recovery system, Site-specific risk assessment, an ecological assessment, and soil removal and off-Site disposal.
Harrington	Auto Service Facility	2	TPH, chlorinated VOCs, PCBs, and metals	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal	In Process	Completed a subsurface investigation for a private action at an existing auto service facility. Investigate around hydraulic lifts, floor drains, a former UST location, and for off-Site concerns. Project is currently a PRGI site.
Harrington	Highway ROW	2	TPH, BTEX, and PAHs	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Removed orphan tank and approximately 125 tons of petroleum-impacted soil discovered in state highway ROW.
Harrington	Former Bulk Petroleum Plant	4	Petroleum COC including TPH, BTEX, and PAHs	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal	In Process	Investigation and delineation of COC occurrence in soil and groundwater. Recommended soil removal and off-Site disposal.
Harrington	Former Gas Station	4	Petroleum related COC including TPH and PAHs	Soil	LUST	Soil Excavation and Disposal	NFA Letter	Removed a waste oil tank and oil/water separator. Completed delineation activities using push-probe technology. Removed approximately 150 tons of petroleum-impacted soil.
Harrington	Manufacturing Facility	5	Petroleum related COC including TPH and PAHs	Soil and Groundwater	STATE CLEANUP	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Removed a concrete vault used to waste/cooling oil. Delineated COC occurrence in soil and groundwater. Removed approximately 80 tons of petroleum-impacted soil. Evaluated remaining soil impacts against a site-specific TPH cleanup level developed using the Draft Washington State Department of Ecology (WDEC) TPH Guidance. Closure results were below the non-default Site-specific industrial closure levels for TPH.

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SOIL EXCAVATION & DISPOSAL

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Fedorchak	Industrial	4	TPH-GRO&DRO, VOCs, PNAs, Metals	Surface Soils	PRIVATE ACTION	Soil Excavation and disposal	Private action closure	Confirmation Sampling only
Fedorchak	Industrial	4	TPH-ERO	Surface Soils	PRIVATE ACTION	Soil Excavation and disposal	Private action closure	Confirmation Sampling only
Goodwin	Former Fuel Station	2	Benzene, MTBE	Soil and GW	LUST	Soil Excavation and Disposal	In Process	Will apply for closure in early 2007 with appropriate deed restrictions.
Goodwin	Nursery	4	TPH, Benzene, MTBE	Soil and GW	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	UST pull and excavation, delineation, NFA.
Gremos	Former Gas Stations, Bulk Plants, Commercial Dry Cleaners		Petroleum Fuel, Chlorinated Solvents	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of insurance carriers to determine reasonableness & appropriateness of tasks and expenses.
Gremos	Fourteen Former Gas Stations		Petroleum Fuels	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of property owner determine remediation completion status.
Haviland	BROWNFIELDS; Former Foundry	5	TPH, SVOCs	Soil; groundwater	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	Completed a site-specific risk assessment to address potential health risks to future receptors including jail inmates jail employees. Site successfully redeveloped at county jail.
Haviland	Semi-trailer Manufacturing Plants and Maintenance Hubs.		cVOCs; TPH; metals	Soil; groundwater	LUST	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Assessment, remediation, and closure of numerous facilities across the U.S. under various State programs.
Haviland	Former Gas Stations, Mfg. Plants; Auto Shops	4	TPH; cVOCs; metals	Soil and groundwater	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Historic multi-use property being developed for residences and retail businesses; conducted vapor intrusion screening and modeling.
Mallin	Resident	5	TPH, Diesel Fuel	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Diesel spill resulting from automobile accident; excavated impacted area, fully remediated.
Northam	Former Goodyear Tire/Battery/Auto (TBA)	5	Hydraulic Oil	Soil	LUST	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Nondefault TPH closure goals identified using RISC guidance.
Northam	Crossroads Mall Elevator		Hydraulic Oil	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	
Northam	Northwoods Mall		Hydraulic Oil	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	
Northam	Former Kmart TBA	3	Hydraulic Oil	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Defined extent of soil impacts, provided estimated costs for remediation via excavation/disposal
Northam	Trolley Square		Diesel Fuel	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Defined extent of soil impacts, provided estimated costs for remediation via excavation/disposal
Opell	Former Gasoline Station	2	BTEX - MTBE	Soil and Groundwater	LUST	Soil Excavation and Disposal	In Process	Non Default approach planned for closure.
Opell	Orphan UST in INDOT ROW	2	Petroleum	Soil	LUST	Soil Excavation and Disposal	Private action closure	INDOT ROW improvement discovery of orphan tank. Contractor excavated impacted soils. KEI provided disposal assistance and push probe services.
Opell	Interstate Hwy- Rest Area	2	Diesel Fuel Jet Fuel	Soil	LUST PRIVATE ACTION BROWNFIELDS	Soil Excavation and Disposal In-situ Soil Vapor Extraction	Private Action Closure Comfort Letter	Interstate Hwy - former heating oil tanks for rest area removed by contractor. KEI provided excavation assistance to INDOT contractor and disposal approval assistance. Industrial facility-operated and sampled already installed SVE network to monitor remediation. Brownfield site - discovered old UST as part of building demolition.
Winningham	Manufacturing-Stamping Plant	7	TPH-DRO, TPH-ERO, BTEX, PAH	Soil	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	PRGI project for Studebaker/Oliver Redevelopment Initiative. All of the visually impacted soil was removed and disposed. Closure confirmation samples were collected for DRO-ERO, BTEX and PAHs. Some samples exceeded the 100 mg/kg DRO-ERO closure standard; a Risk Assessment was performed to obtain closure.

KERAMIDA PROJECT EXPERIENCE
SOIL EXCAVATION & DISPOSAL

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Winningham	Road Construction Company-Materials and Equipment Yard	2	VOCs, TPH	Soil	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Site consisted of buried drums containing road surface treatment and curing compounds. Approximately 50 drums of surplus product was placed in a trench, crushed, and buried. Excavation proceeded until RISC Residential Closure Levels were achieved.
Zabonick	Industrial	2	Hydraulic Oil	Soil, groundwater, surface water	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Soil and groundwater investigation, spill
Zabonick	Hospital	5	TPH, Petroleum	Soil	STATE CLEANUP	Soil Excavation and Disposal	In Process	Site-specific cleanup goals using RISC guidance.
Zabonick	Heavy Manufacturing	1	Heavy Oils - Hydraulic, Diesel	Soil, groundwater, surface water	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Ast release to tank farm and subsequent impact to receiving stream.

IN-SITU SOIL VAPOR EXTRACTION

KERAMIDA PROJECT EXPERIENCE
IN-SITU SOIL VAPOR EXTRACTION

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Sargent	Bulk Chemical Distribution Facility	4	Petroleum & Chlorinated Solvents	Soil and Groundwater	PRIVATE ACTION	In-situ soil vapor extraction, Groundwater extraction and treatment	In Process	Bulk chemical facility - chemical blending, repackaging, and distribution. Railcar and semi-truck tanker unloading operations. 26 ASTs ranging in size from 12,000 to 15,000 gallons of pure product ranging from petroleum compounds to chlorinated solvents. Three heating oil USTs. Vapor intrusion into the office building. Push-probe investigation. Installation of monitoring wells. On and off-site VOC groundwater plume. Impacted soils. Removal of ASTs and USTs. Pumping test. Pilot Tests for soil vapor extraction, airsparging, Fenton's Reagent, and pump and treat. Due to the shallow groundwater, a treatment system with jet pumps was installed to pull down the groundwater table and an SVE system extracted the vapors from the soil. The extracted groundwater from three recovery wells is treated through an airstripper. The SVE system consists of 25 vertical SVE wells and two sets of horizontal extraction wells. Over 16,000 pound of VOC have been removed from the soil. Total VOC concentration in the groundwater have been reduced from over 1,000,000 ug/l to 5,000 ug/l. Examples of specific compound reductions are: vinyl chloride from 9,000 ug/l to 8 ug/l, toluene from 94,000 ug/l to 1,300 ug/l, and xylene from over a million to 3,200 ug/l.
Harrington	Former Manufacturing Facility	4	TPH, PAHs, Chlorinated VOCs	Soil, Groundwater	BROWNFIELDS	Sub-slab Venting	In Process	Investigated petroleum COC and chlorinated VOC occurrence in former USTs cavities at power house building which was converted to office space. The former manufacturing building has been converted to residential and office space. Completed soil vapor, sub-slab, and indoor air sampling for chlorinated VOCs in both buildings. Venting system has been recommended and designed, but not implemented.
Fedorchak	Former Printing Operation	4	cVOCs; TPH	Soil; groundwater	PRIVATE ACTION	Soil Vapor Extraction	Private action closure	Conducted vapor intrusion screening and modeling; designed and installed soil vapor abatement system in coordination with property developer and construction company. Site redeveloped as residential loft units.
Fedorchak	Industrial/Commercial/Residential	4	TPH-GRO&DRO, VOCs, PNAs	Soil and Groundwater	BROWNFIELDS	In-situ Soil Vapor Extraction	In Process	Site currently used as mixed commercial/residential development. Site currently used as mixed commercial/residential development. UST removal and disposal, indoor air abatement using SVE/sealants in a basement of residential area and rebalancing of ventilation system in office area. Sub-slab vapor, soil gas and indoor air sampling, traditional geoprobe soil/groundwater investigation, geophysical investigation.
Fedorchak / Various	Gas Station	6	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	UST removal and disposal, free product removal and Soil Vapor Extraction/AS system	In Process	Traditional geoprobe/HAS drilling soil/groundwater investigation, free product fingerprinting and geophysical investigation.
Mallin	Retail Fuel Station	1	Benzene	GW	LUST	In-situ air sparging and Soil Vapor Extraction, Monitored natural attenuation / risk analysis	In Process	Residual impacted groundwater, Site near closure.

KERAMIDA PROJECT EXPERIENCE
IN-SITU SOIL VAPOR EXTRACTION

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Mallin	Former Bulk Fuel Station	4	TPH, Petroleum Fuels	Soil	LUST	In-situ air sparging in-situ soil vapor extraction Monitored natural attenuation / risk analysis	In Process	Groundwater remediated, conducting annual soil MNA monitoring.
Opell	Interstate Hwy- Rest Area	2	Diesel Fuel Jet Fuel	Soil	LUST PRIVATE ACTION BROWNFIELDS	Soil Excavation and Disposal In-situ Soil Vapor Extraction	Private Action Closure Comfort Letter	Interstate Hwy - former heating oil tanks for rest area removed by contractor. KEI provided excavation assistance to INDOT contractor and disposal approval assistance. Industrial facility-operated and sampled already installed SVE network to monitor remediation. Brownfield site - discovered old UST as part of building demolition.
Zabonick	Residential Redevelopment	4	TPH, PAH, Chlorinated Solvents	Soil and groundwater	PRIVATE ACTION	In-situ soil vapor extraction	In Process	Potential Brownfields redevelopment evaluation in process.
Zabonick	Retail Petroleum	6	Gasoline, Diesel	Soil and groundwater	LUST	In-situ soil vapor extraction	In Process	
Zabonick	Retail Petroleum	4	Gasoline, Diesel	Soil and groundwater	LUST	In-situ soil vapor extraction	In Process	Groundwater treatment via sparging.

EX-SITU SOIL TREATMENT

KERAMIDA PROJECT EXPERIENCE
EX-SITU SOIL TREATMENT

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Municipal Airport	5	TPH	Soil	LUST	Ex-situ soil treatment	NFA Letter	Completed confirmatory soil sampling at an on-Site land treatment cell.
Harrington	Contractor Maintenance Facility	3	Petroleum COC including TPH, BTEX, and PAHs	Soil	LUST	Ex-situ soil treatment	NFA Letter	Completed soil removal and treatment in an off-site land treatment cell. Unable to meet residential closure goals. Successfully negotiated closure of the treatment cell using using a non-default approach under the IDEM RISC guidance. The land treatment cell soils were evaluated against a site-specific TPH cleanup level developed using the Draft Washington State Department of Ecology (WDEC) TPH Guidance. Closure results were below the non-default Site-specific residential closure levels for TPH.
Harrington	Municipal Airport	4	Petroleum related COC including TPH and BTEX	Soil and Groundwater	LUST	Ex-situ soil treatment	NFA Letter	Investigation and delineation of COC occurrence in soil and groundwater. Removed approximately 1,500 tons of soil and treated in an on-site land treatment cell.

GROUNDWATER EXTRACTION AND TREATMENT

KERAMIDA PROJECT EXPERIENCE
GROUNDWATER EXTRACTION & TREATMENT

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Sargent	Former Service Station	5	Petroleum Fuels, Waste Oils	Soil and Groundwater	LUST	Soil Excavation and Disposal, Groundwater Extraction and Treatment, Monitored Natural Attenuation / Risk Analysis	In Process	Complex site involving intrusion of petroleum vapors into neighboring residences. Some neighbors were evacuated. Detailed soil vapor intrusion assessment completed. Used sewer camera to determine pathways of clay tiles and sewer lines on and off-site, which were conduits that spread the contamination in the soil. Station building and adjacent residence demolished and former basements pumped and removed. Soil remediation was complete through excavation with disposal at a landfill. Groundwater contamination completed through focused pump and treat and plume stability monitoring under RISC. Off-site impacts under alley way closed using risk-based evaluation. No further action request submitted.
Sargent	Bulk Chemical Distribution Facility	4	Petroleum & Chlorinated Solvents	Soil and Groundwater	PRIVATE ACTION	In-situ soil vapor extraction, Groundwater extraction and treatment	In Process	Bulk chemical facility - chemical blending, repackaging, and distribution. Railcar and semi-truck tanker unloading operations. 26 ASTs ranging in size from 12,000 to 15,000 gallons of pure product ranging from petroleum compounds to chlorinated solvents. Three heating oil USTs. Vapor intrusion into the office building. Push-probe investigation. Installation of monitoring wells. On and off-site VOC groundwater plume. Impacted soils. Removal of ASTs and USTs. Pumping test. Pilot Tests for soil vapor extraction, airsparging, Fenton's Reagent, and pump and treat. Due to the shallow groundwater, a treatment system with jet pumps was installed to pull down the groundwater table and an SVE system extracted the vapors from the soil. The extracted groundwater from three recovery wells is treated through an airstripper. The SVE system consists of 25 vertical SVE wells and two sets of horizontal extraction wells. Over 16,000 pound of VOC have been removed from the soil. Total VOC concentration in the groundwater have been reduced from over 1,000,000 ug/l to 5,000 ug/l. Examples of specific compound reductions are: vinyl chloride from 9,000 ug/l to 8 ug/l, toluene from 94,000 ug/l to 1,300 ug/l, and xylene from over a million to 3,200 ug/l.
Sargent	Former Automobile gas tank manufauturer	2	TPH and VOCs	Soil and Groundwater	VRP, BROWNFIELDS	Groundwater extraction and treatment, Phyto-remediation, Risk Assessment	In Process	Push-probe investigation. Pilot test and bench studies completed for enhance bioremediation. Pump and treat pilot test. On and off-site groundwater contamination. Development of bid specification for treatment system. No well zone ordinance past by the City of Scottsburg as an institutional control. Helped the City of Scottsburg secure over $500,000 in funding from the USEPA and State of Indiana BROWNFIELDS Programs for remediation. Pump and treatment system to be installed end of 2006 and phyto-barrier to be installed in spring of 2007. Neighboring manufacturer to expand on to property after the start of the remediation system.
Gremos	Former Coatings Manufacturer	4	Petroleum Solvents, Chlorinated Solvents	Soil and Groundwater	STATE CLEANUP	Groundwater extraction and treatment	In Process	Reviewer of other consultant's work on behalf of insurance carriers to determine reasonableness & appropriateness of tasks and expenses.

KERAMIDA PROJECT EXPERIENCE
GROUNDWATER EXTRACTION & TREATMENT

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Mallin	Retail Fuel Station	5	Benzene, MTBE	GW	LUST	Groundwater extraction and treatment	In Process	Groundwater in tank cavity impacted; pumped out and disposed. Site delineated.
Zabonick	Retail Petroleum	1	Gasoline, Diesel	Soil and groundwater	LUST	Groundwater extraction and treatment	Private action closure	Document review
Zabonick	Retail Petroleum	1	Gasoline, Diesel	Soil and groundwater	LUST	Groundwater extraction and treatment	Private action closure	Document review

IN-SITU AIR SPARGING

KERAMIDA PROJECT EXPERIENCE
IN-SITU AIR SPARGING

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Residential Development	4	Chlorinated VOCs	Groundwater	PRIVATE ACTION	In-situ Soil vapor extraction and In-situ air sparging	In Process	Completed a subsurface investigation at a residential development to investigation chlorinated VOC occurrence in groundwater and evaluated vapor intrusion pathway of existing and future homes. The source is a former adjacent manufacturing facility which is currently being managed through the VRP.
Fedorchak	Former Auto Parts Manufacturing	4	cVOCs	Soil; groundwater	VRP	In-situ Air Sparging, Soil Vapor Extraction, Soil Excavation, Phyto-remediation, Risk Assessment	In Process	Multi-faceted remediation approach including risk assessment and exposure prevention, soil excavation and disposal, SVE, air sparging.
Fedorchak / Various	Gas Station	6	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	UST removal and disposal, free product removal and Soil Vapor Extraction/AS system	In Process	Traditional geoprobe/HAS drilling soil/groundwater investigation, free product fingerprinting and geophysical investigation.
Mallin	Retail Fuel Station	1	Benzene	GW	LUST	In-situ air sparging and Soil Vapor Extraction, Monitored natural attenuation / risk analysis	In Process	Residual impacted groundwater, Site near closure.
Mallin	Former Bulk Fuel Station	4	TPH, Petroleum Fuels	Soil	LUST	In-situ air sparging in-situ soil vapor extraction Monitored natural attenuation / risk analysis	In Process	Groundwater remediated, conducting annual soil MNA monitoring.

IN-SITU BIOLOGICAL TREATMENT

KERAMIDA PROJECT EXPERIENCE
IN-SITU BIOLOGICAL TREATMENT

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Former Tractor Trailer Repair Center	1	Diesel Fuel	Soil and Groundwater	LUST	In-situ Biological Treatment Soil Excavation and Disposal	NFA Letter	Petroleum impacts identified during removal of two diesel USTs. Impacted soils removed. Nutrients and microbes introduced to subsurface to enhance bio-remediation of residual contamination.
Harrington	Auto Service Center/Former Gas Station	6	TPH, BTEX, and PAHs	Groundwater	STATE CLEANUP	Monitored natural attenuation / risk analysis In-situ Bioremediation	In Process	Removed orphan tank at Site and installed monitoring wells to fully delineate petroleum COC occurrence in groundwater. Injected potassium nitrate in groundwater plume area to expedite natural attenuation.
Gremos	Former Gas Stations, Bulk Plants, Commercial Dry Cleaners		Petroleum Fuel, Chlorinated Solvents	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of insurance carriers to determine reasonableness & appropriateness of tasks and expenses.
Gremos	Fourteen Former Gas Stations		Petroleum Fuels	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of property owner determine remediation completion status.

IN-SITU CHEMICAL OXIDATION

KERAMIDA PROJECT EXPERIENCE
IN-SITU CHEMICAL OXIDATION

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Haviland	Auto Parts Manufacturing		cVOCs	Soil; groundwater	STATE CLEANUP	In-situ chemical oxidation, Phyto-remediation	In Process	Site being voluntarily coordinated with the Michigan DEQ.

PHYOREMEDIATION

KERAMIDA PROJECT EXPERIENCE
PHYTOREMEDIATION

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Sargent	Former Automobile gas tank manufauturer	2	TPH and VOCs	Soil and Groundwater	VRP, BROWNFIELDS	Groundwater extraction and treatment, Phyto-remediation, Risk Assessment	In Process	Push-probe investigation. Pilot test and bench studies completed for enhance bioremediation. Pump and treat pilot test. On and off-site groundwater contamination. Development of bid specification for treatment system. No well zone ordinance past by the City of Scottsburg as an institutional control. Helped the City of Scottsburg secure over $500,000 in funding from the USEPA and State of Indiana BROWNFIELDS Programs for remediation. Pump and treatment system to be installed end of 2006 and phyto-barrier to be installed in spring of 2007. Neighboring manufacturer to expand on to property after the start of the remediation system.
Fedorchak	Former Auto Parts Manufacturing	4	cVOCs	Soil; groundwater	VRP	In-situ Air Sparging, Soil Vapor Extraction, Soil Excavation, Phyto-remediation, Risk Assessment	In Process	Multi-faceted remediation approach including risk assessment and exposure prevention, soil excavation and disposal, SVE, air sparging.
Haviland	Auto Parts Manufacturing		cVOCs	Soil; groundwater	STATE CLEANUP	In-situ chemical oxidation, Phyto-remediation	In Process	Site being voluntarily coordinated with the Michigan DEQ.

GROUNDWATER CONTAINMENT / BARRIER SYSTEM

KERAMIDA PROJECT EXPERIENCE
GROUNDWATER CONTAINMENT / BARRIER SYSTEM

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
NO GROUNDWATER CONTAINMENT / BARRIER SYSTEM								

MONITORED NATURAL ATTENUATION / RISK ANALYSIS

KERAMIDA PROJECT EXPERIENCE
MONITORED NATURAL ATTENUATION / RISK ANALYSIS

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
West	Industrial - Paper and Allied Products	6	Xylene	Soil and Groundwater	VRP	Monitored natural attenuation / risk analysis	CNS letter	Soil and groundwater delineation
West	Industrial - Paper and Allied Products	6	Toluene solvent	Soil and Groundwater	VRP	Monitored natural attenuation / risk analysis	In Process	Soil and groundwater delineation. Remediation complete and ready for confirmation sampling with IDEM
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Monitored natural attenuation / risk analysis	Status Letter	Install wells and quarterly groundwater monitoring. Commercial redevelopment has been initiated.
West	Municipal Maintenance Garage	4	Gasoline and diesel	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	ERC
West	Municipal Maintenance Garage	4	Gasoline and diesel	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	ERC
Sargent	Former Service Station	5	Petroleum Fuels, Waste Oils	Soil and Groundwater	LUST	Soil Excavation and Disposal, Groundwater Extraction and Treatment, Monitored Natural Attenuation / Risk Analysis	In Process	Complex site involving intrusion of petroleum vapors into neighboring residences. Some neighbors were evacuated. Detailed soil vapor intrusion assessment completed. Used sewer camera to determine pathways of clay tiles and sewer lines on and off-site, which were conduits that spread the contamination in the soil. Station building and adjacent residence demolished and former basements pumped and removed. Soil remediation was complete through excavation with disposal at a landfill. Groundwater contamination completed through focused pump and treat and plume stability monitoring under RISC. Off-site impacts under alley way closed using risk-based evaluation. No further action request submitted.
Sargent	DNR Reservior	3	TPH	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Monitored natural attenuation and confirmation sampling.
Sargent	DNR Fish Hatchery	2	BTEX/MTBE	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis, Soil Excavation and Disposal	NFA Letter	Soil excavation with and confirmation sampling and monitored natural attenuation for the groundwater.
Sargent	DNR State Park Maintainance area	6	BTEX/MTBE	Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Push-probe investigation and installation of monitoring wells. Quarterly sampling. Monitored natural attenuation.
Sargent	INDOT Sub-District	7	TPH, BTEX/MTBE	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Initial Site Characterization and confirmation sampling.
Harrington	Auto Service Center/Former Gas Station	6	TPH, BTEX, and PAHs	Groundwater	STATE CLEANUP	Monitored natural attenuation / risk analysis In-situ Bioremediation	In Process	Removed orphan tank at Site and installed monitoring wells to fully delineate petroleum COC occurrence in groundwater. Injected potassium nitrate in groundwater plume area to expedite natural attenuation.
Harrington	Former Gas Station	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	LUST	Free product removal Monitored natural attenuation / risk analysis	In Process	Completed free product recovery activities from three monitoring wells. Completed approximately 25 boings and installed 5 additional monitoring wells to characterize petroleum COC occurrence in soil and groundwater. RWP approved by IDEM for the removal of approximately 3,000 tons of soil and MNA for groundwater.
Harrington	Manufacturing Facility	5	VOCs	Groundwater	LUST	Monitored natural attenuation / risk analysis	In Process	Completed further site investigation including approximately 12 borings and installed 7 additional monitoring wells, one of which is 1-inch, to delineate toluene occurrence in groundwater. Recommended MNA and an ERC. Quarterly monitoring to begin in fourth quarter.
Harrington	Current Gas Station	5	Petroleum COC including TPH, BTEX, MTBE, and PAHs and lead	Soil and Groundwater	LUST	Monitored Natural Attenuation / Risk Analysis	In Process	Prepared proposed work plan for a site-specific TPH evaluation per RISC guidance, soil removal and off-site disposal, and groundwater monitoring. Met with IDEM to discuss plan. IDEM was in general agreement with the plan. Initiating work this quarter.

KERAMIDA PROJECT EXPERIENCE
MONITORED NATURAL ATTENUATION / RISK ANALYSIS

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Fedorchak	Gas Station	1	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	ERC & Monitored natural attenuation / risk analysis	NFA Letter	Traditional geoprobe soil/groundwater investigation.
Haviland	Casket Manufacturing	5	TPH; SVOCs; cVOCs; metals	Soil; groundwater	STATE CLEANUP	Monitored natural attenuation / risk analysis	In Process	Remedial plan currently being developed.
Mallin	Bulk Fuel Station	4	Benzene, MTBE	Soil and GW	LUST	Free product removal Monitored natural attenuation/risk analysis	In Process	Approved CAP, Free product removal from tank cavity when present, soil and GW MNA.
Mallin	Former Retail Fuel Station	3	TPH	Soil	LUST	Monitored natural attenuation / risk analysis	In Process	Annual soil MNA monitoring.
Mallin	Retail Fuel Station	1	Benzene	GW	LUST	In-situ air sparging and Soil Vapor Extraction, Monitored natural attenuation / risk analysis	In Process	Residual impacted groundwater, Site near closure.
Mallin	Retail Fuel Station	2	Petroleum Fuels	Soil and GW	LUST	Monitored natural attenuation / risk analysis	NFA Letter	
Mallin	Former Bulk Fuel Station	4	TPH, Petroleum Fuels	Soil	LUST	In-situ air sparging in-situ soil vapor extraction Monitored natural attenuation / risk analysis	In Process	Groundwater remediated, conducting annual soil MNA monitoring.
Mallin	Former Retail Fuel Station	4	TPH, Benzene, MTBE, Petroleum Fuels	Soil and GW	LUST	Monitored natural attenuation / risk analysis	In Process	Project inactive for several years. New CAP recently approved, soil and GW MNA.
Mallin	Retail Fuel Station	4	TPH, MTBE, Petroleum Fuels	Soil and GW	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Project inactive for several years. Minimal impact, NFA issued after delineation and short period of monitoring.
Winningham	Dry Cleaners	4	Mineral Spirits	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis, Free Product Removal	In Process	Classic delineation of a LNAPL in a sand aquifer. The Site is located in a well field. Fractionation analysis of the mineral spirits is being performed.

FREE PRODUCT REMOVAL

KERAMIDA PROJECT EXPERIENCE
FREE PRODUCT REMOVAL

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Manufacturing Facility	7	Hydraulic and Cutting Oils, PCBs and metals	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal, Free Product Removal, Human Health & Ecological Risk Assessment	In Process	The Site consists of a 250,000 square foot manufacturing facility located on approximately 49 acres of land. Competed a Site-wide remedial investigation consisting 87 soil borings, a geophysical survey, installation of monitoring wells, sampling of wells, sediment and surface water sampling, and a Site-specific evaluation of TPH occurrence. Site-specific TPH cleanup goals were established using the June 2006 RISC Guidance. Product-typing was also performed to determine the nature and age of the free product. Investigation results identified areas above and below the non-default Site-specific TPH closure levels. Proposed remedial strategy is installation of a free product recovery system, Site-specific risk assessment, an ecological assessment, and soil removal and off-Site disposal.
Harrington	Former Gas Station	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	LUST	Free product removal Monitored natural attenuation / risk analysis	In Process	Completed free product recovery activities from three monitoring wells. Completed approximately 25 boings and installed 5 additional monitoring wells to characterize petroleum COC occurrence in soil and groundwater. RWP approved by IDEM for the removal of approximately 3,000 tons of soil and MNA for groundwater.
Fedorchak	Industrial/Foundry	6	SVOCs	Subsurface Soils & Groundwater	VRP	Free product & soil removal and disposal through Sheeting inside building	In Process	Traditional geoprobe soil/groundwater investigation and free product fingerprinting.
Gremos	Former Gas Stations, Bulk Plants, Commercial Dry Cleaners		Petroleum Fuel, Chlorinated Solvents	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of insurance carriers to determine reasonableness & appropriateness of tasks and expenses.
Gremos	Fourteen Former Gas Stations		Petroleum Fuels	Soil and Groundwater	LUST	Soil Excavation and Disposal In-situ Biological Treatment Free Product Removal	In Process	Reviewer of other consultant's work on behalf of property owner determine remediation completion status.
Mallin	Retail Fuel Station	1	Petroleum Fuels	Soil and GW	LUST	Free product removal	In Process	Product typing. Site delineated, CAP likely to be initiated in early 2007.
Winningham	Dry Cleaners	4	Mineral Spirits	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis, Free Product Removal	In Process	Classic delineation of a LNAPL in a sand aquifer. The Site is located in a well field. Fractionation analysis of the mineral spirits is being performed.

OTHER

KERAMIDA PROJECT EXPERIENCE
OTHER

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
West	Former Auto Shop	4	TPH; cVOCs	Soil and groundwater	BROWNFIELDS	Risk Assessment	Status Letter	Conducted vapor intrusion screening and modeling; designed and installed soil vapor abatement system in coordination with property developer and construction company.
West	Industrial - Paper and Allied Products	6	Petroleum	Soil	VRP	Remediation Not Required	CNS letter	TPH landfarm GRO/DRO. Confirmation sampling and closure
West	Commercial, Former Municipal Dump	3	BTEX, metals, chlorinated solvents	Soil and Groundwater	BROWNFIELDS	Risk Assessment	In Process	Received SAGI for characterization and PRGI for UST removal. Site characterization/risk assessment.
West	Trucking Maintenance	4	Waste Oil	Soil and Groundwater	LUST	Risk Assessment	In Process	Non-default industrial closure using RISC and ERC. Non-default TPH closure goals developed using RISC guidance.
West	Former Jewelry Manufacturer	4	PAHs, cVOCs	Soil and Groundwater	BROWNFIELDS	Risk Assessment	Status Letter	Redevelopment as parking lot has been completed. Conducted soil vapor intrusion study and site-specific risk assessment, using exposure prevention remedy.
West	Commercial, Specialty Gases	3	Diesel	Soil	BROWNFIELDS	Risk Assessment	In Process	Received SAGI for characterization
West	Wastewater Treatment Plant	4	Gasoline and diesel	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Fractionation, MNA, ERC
West	Former Rail Yard	4	PAHs	Soil and Groundwater	BROWNFIELDS	Risk Assessment	In Process	Test trenching, random sampling. To be redeveloped as youth golf academy. Centerpiece for area development plans.
West	Former Foundry	4	PAHs	Soil	BROWNFIELDS	Risk Assessment	In Process	Proposed residential redevelopment. Use of EPA funds.
West	Former Plating Facility	4	PAHs	Soil	BROWNFIELDS	Not Yet Determined	In Process	Investigation on-going. Proposed for redevelopment as parking for adjacent industrial facility
Sargent	Former Service Station	1	Gasoline	Soil and Groundwater	LUST	Not Yet Determined	In Process	Removed four USTs and product lines. Client chose not to investigate further or remediate. Site is an IDEM Enforcement case.
Sargent	Former Automobile gas tank manufauturer	2	TPH and VOCs	Soil and Groundwater	VRP, Brownfields	Groundwater extraction and treatment, Phyto-remediation, Risk Assessment	In Process	Push-probe investigation. Pilot test and bench studies completed for enhance bioremediation. Pump and treat pilot test. On and off-site groundwater contamination. Development of bid specification for treatment system. No well zone ordinance past by the City of Scottsburg as an institutional control. Helped the City of Scottsburg secure over $500,000 in funding from the USEPA and State of Indiana Brownfields Programs for remediation. Pump and treatment system to be installed end of 2006 and phyto-barrier to be installed in spring of 2007. Neighboring manufacturer to expand on to property after the start of the remediation system.
Sargent	DNR Tree Nursery	2	TPH, BTEX/MTBE, SVOCs	Soil and Groundwater	LUST	Not Yet Determined	In Process	USTs to refuel DNR vehicles at nursery. Delineation complete. RWP being developed.
Sargent	DNR State Park Maintainance area	2	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Sargent	DNR State Forest Maintainance area	1	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Sargent	DNR State Park Maintenance area	3	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Harrington	Manufacturing Facility	3	TPH, PAHs, and chlorinated solvents	Soil and Groundwater	VRP	Risk Assessment	In Process	Investigation and delineation of COC occurrence in soil and groundwater. Groundwater monitoring and ERCs for both soil and groundwater to be implemented
Harrington	Retail Mall	4	TPH and PAHs	Soil and Groundwater	PRIVATE ACTION	No action required	Private action closure	Investigated the presence/absence of two large heating oil USTs through a geophysical survey and investigated subsurface condition around the closed heating oil tanks

KERAMIDA PROJECT EXPERIENCE
OTHER

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Golf Course	5	Lead	Groundwater	LUST	No action required	NFA Letter	Completed confirmatory groundwater sampling for lead from an existing well.
Harrington	Manufacturing Facility	7	Hydraulic and Cutting Oils, PCBs and metals	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal, Free Product Removal, Human Health & Ecological Risk Assessment	In Process	The Site consists of a 250,000 square foot manufacturing facility located on approximately 49 acres of land. Competed a Site-wide remedial investigation consisting 87 soil borings, a geophysical survey, installation of monitoring wells, sampling of wells, sediment and surface water sampling, and a Site-specific evaluation of TPH occurrence. Site-specific TPH cleanup goals were established using the June 2006 RISC Guidance. Product-typing was also performed to determine the nature and age of the free product. Investigation results identified areas above and below the non-default Site-specific TPH closure levels. Proposed remedial strategy is installation of a free product recovery system, Site-specific risk assessment, an ecological assessment, and soil removal and off-Site disposal.
Harrington	Retail Store	4	Petroleum related COC including TPH and PAHs	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Removed kerosene tank. Investigation and delineation of COC occurrence in soil and groundwater. Completed a Site-specific evaluation of TPH occurrence per RISC Guidance. Investigation results were below the non-default Site-specific TPH closure levels. ERC for soil.
Harrington	Current Gas Station	6	Petroleum related COC including BTEX and MTBE	Groundwater	LUST	Vacuum-Enhanced Pump & Treat	In Process	Completed approximately 10 borings and installed 5 additional monitoring wells to characterize petroleum COC occurrence in groundwater. Completed pilot test for vacuum-enhanced groundwater pump and treat system.
Harrington	Power Plant	4	Petroleum related COC including TPH and PAHs	Soil	PRIVATE ACTION	Risk Assessment	Private action closure	Completed hand augering in a former spill area. Completed a Site-specific evaluation of TPH occurrence per RISC Guidance. Investigation results were below the non-default Site-specific TPH closure levels. Recommended implementation of an ERC.
Harrington	Former Equipment Rental Facility	4	Petroleum related COC and chlorinated VOC	Groundwater	LUST	Risk Assessment	In Process	Completed further site investigation for client. Completed three borings and installed five 1-inch monitoring wells using push-probe technology.
Harrington	Former Gas Station	4	Petroleum related COC	Groundwater	LUST	Risk Assessment	NFA Letter	Completed further site investigation for client including three borings using push-probe technology. Returned to site to collect one groundwater sample using low flow procedure to confirm the absence of lead occurrence. Data used to complete a risk-based closure.
Harrington	Contractor Maintenance Facility	4	Petroleum related COC including TPH	Soil	LUST	Risk Assessment	NFA Letter	IDEM requested a further site investigation of soil and groundwater around a former waste oil tank which was removed from a concrete encasement. Successfully negotiated a further site investigation sampling plan to confirm that a release of waste oil did not occur beyond the concrete encasement.
Harrington	Municipal Airport	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Completed a further site investigation of an apparent release from former USTs. Completed sampling plan for pre-approval by IDEM. Completed approximately 15 borings using push-probe technology.

KERAMIDA PROJECT EXPERIENCE
OTHER

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Manufacturing Facility	5	Petroleum related COC including TPH and PAHs	Soil and Groundwater	STATE CLEANUP	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Removed a concrete vault used to waste/cooling oil. Delineated COC occurrence in soil and groundwater. Removed approximately 80 tons of petroleum-impacted soil. Evaluated remaining soil impacts against a site-specific TPH cleanup level developed using the Draft Washington State Department of Ecology (WDEC) TPH Guidance. Closure results were below the non-default Site-specific industrial closure levels for TPH.
Fedorchak	Former Auto Parts Manufacturing	4	cVOCs	Soil; groundwater	VRP	In-situ Air Sparging, Soil Vapor Extraction, Soil Excavation, Phyto-remediation, Risk Assessment	In Process	Multi-faceted remediation approach including risk assessment and exposure prevention, soil excavation and disposal, SVE, air sparging.
Fedorchak	Industrial/Foundry	6	BTEX/MTBE & PNAs	Subsurface Soils & Groundwater	VRP	UST & soil removal and disposal	CNS letter	Traditional geoprobe soil/groundwater investigation.
Fedorchak	Industrial/Foundry	6	SVOCs	Subsurface Soils & Groundwater	VRP	Free product & soil removal and disposal through Sheeting inside building	In Process	Traditional geoprobe soil/groundwater investigation and free product fingerprinting.
Fedorchak	Gas Station	1	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	ERC & Monitored natural attenuation / risk analysis	NFA Letter	Traditional geoprobe soil/groundwater investigation.
Fedorchak / Various	Gas Station	6	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	UST removal and disposal, free product removal and Soil Vapor Extraction/AS system	In Process	Traditional geoprobe/HAS drilling soil/groundwater investigation, free product fingerprinting and geophysical investigation.
Goodwin	Residential	5	TPH	Soil	PRIVATE ACTION	Risk Assessment	Private action closure	Slightly impacted soils discovered, conducted TPH fractionation per RISC Guidance. Soils considerably below non-default levels.
Haviland	Brownfields; Former Foundry	5	TPH, SVOCs	Soil; groundwater	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	Completed a site-specific risk assessment to address potential health risks to future receptors including jail inmates jail employees. Site successfully redeveloped at county jail.
Haviland	Semi-trailer Manufacturing Plants and Maintenance Hubs.		cVOCs; TPH; metals	Soil; groundwater	LUST	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Assessment, remediation, and closure of numerous facilities across the U.S. under various State programs.
Mallin	Former Retail Fuel Station	4	Benzene, MTBE	Soil and GW	LUST	Not Yet Determined	In Process	Recently delineated Site and submitted FSI
Mallin	Private Property	4	No contaminants found	None	PRIVATE ACTION	No Remediation Required	Private action closure	UST removal, all samples clean.
Northam	Former Goodyear Tire/Battery/Auto (TBA)	5	Hydraulic Oil	Soil	LUST	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Nondefault TPH closure goals identified using RISC guidance.
Winningham	Manufacturing-Stamping Plant	7	TPH-DRO, TPH-ERO, BTEX, PAH	Soil	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	PRGI project for Studebaker/Oliver Redevelopment Initiative. All of the visually impacted soil was removed and disposed. Closure confirmation samples were collected for DRO-ERO, BTEX and PAHs. Some samples exceeded the 100 mg/kg DRO-ERO closure standard; a Risk Assessment was performed to obtain closure.

ATTACHMENT 6

KERAMIDA PROJECT EXPERIENCE
INDIANA SITE CLOSURES

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
West	Former Auto Shop	4	TPH; cVOCs	Soil and groundwater	BROWNFIELDS	Risk Assessment	Status Letter	Conducted vapor intrusion screening and modeling; designed and installed soil vapor abatement system in coordination with property developer and construction company.
West	Industrial - Paper and Allied Products	6	Xylene	Soil and Groundwater	VRP	Monitored natural attenuation / risk analysis	CNS letter	Soil and groundwater delineation.
West	Industrial - Paper and Allied Products	6	Petroleum	Soil	VRP	Remediation Not Required	CNS letter	TPH landfarm GRO/DRO. Confirmation sampling and closure.
West	Former Jewelry Manufacturer	4	PAHs, cVOCs	Soil and Groundwater	BROWNFIELDS	Risk Assessment	Status Letter	Redevelopment as parking lot has been completed. Conducted soil vapor intrusion study and site-specific risk assessment, using exposure prevention remedy.
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Soil Excavation and Disposal	Status Letter	Conducted geophysical survey to locate USTs. Residential redevelopment of Site has been completed.
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Soil Excavation and Disposal	Status Letter	Residential redevelopment of Site has been initiated.
West	Former Service Station	4	Gasoline and diesel	Soil and Groundwater	BROWNFIELDS	Monitored natural attenuation / risk analysis	Status Letter	Install wells and quarterly groundwater monitoring. Commercial redevelopment has been initiated.
West	Municipal Maintenance Garage	4	Gasoline and diesel	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	ERC
West	Municipal Maintenance Garage	4	Gasoline and diesel	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	ERC
West	Wastewater Treatment Plant	4	Gasoline and diesel	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Fractionation, Monitored Natural Attenuation/Risk Analysis, ERC
Sargent	Former Service Station	4	Gasoline	Soil and Groundwater	LUST	Soil Excavation and disposal	NFA Letter	Removed two USTs and product lines. Overexcavation with disposal at a landfill to complete the soil remediation. Grounwater monitored for one year, contamiation below cleanup goals.
Sargent	Former Service Station and Art Foundry	4	Petroleum Fuels/Waste, Foundry Wastes	Soil	BROWNFIELDS	Soil Excavation and disposal	Status Letter	Used a geophysical survey to find three USTs. Removed USTs and an oil/water separator. Delineated petroleum and heavy metals contamination with push-probe. Foundry soils excavated and disposed of at a hazardous wasted landfill.
Sargent	Former Limestone Quarry and Asphalt Plant Operation	3	Petroleum Fuels, Hydraulic & Motor Oils	Soil	STATE CLEANUP, BROWNFIELDS	Soil Excavation and disposal	NFA Letter	A 500 acre inactive limestone quarry, which operated from 1917 to the 1970s. Small asphalt plant operated on the Site during the 1980s. Investigation include - Phase I, Phase II, Geophysical Survey, Exploratory Trenching, Surface water and sediment, Arsenic in Soil Background Investigation, Archaeological Survey, Asbestos Survey, Wetlands Determination, and Endangered Species Survey. Significant historical research conducted. 74 investigative borings completed. Removed four USTs. 472 tons of impacted material excavated and disposed from various areas. In addition to soil excavation for remediation, an Environmental Restrictive Covenant was used as an institutional control to limit exposure for contamination left in-place. Property was turned into DePauw Park.
Sargent	Shopping Mall, Emergency Generator UST	4	Diesel Fuel	Soil	STATE CLEANUP	Soil Excavation and disposal	NFA Letter	Removal of a 500 gallon UST associated with an emergency generator. Overexcavation of impacted soil.

KERAMIDA PROJECT EXPERIENCE
INDIANA SITE CLOSURES

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Sargent	Shopping Mall, Former Auto Service Center	5	Waste & Virgin Petroleum Products	Soil and Groundwater	LUST	Soil Excavation and disposal	NFA Letter	Push-probe investigation. Removal of hydraulic lifts and oil water separator. Excavation of impacted soil and disposal of pit water. Installation of monitoring wells with one year of monitoring.
Sargent	DNR Reservior	3	TPH	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Monitored natural attenuation and confirmation sampling.
Sargent	DNR Fish Hatchery	2	BTEX/MTBE	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis, Soil Excavation and Disposal	NFA Letter	Soil excavation with and confirmation sampling and monitored natural attenuation for the groundwater.
Sargent	DNR State Park Maintainance area	6	BTEX/MTBE	Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Push-probe investigation and installation of monitoring wells. Quarterly sampling. Monitored natural attenuation.
Sargent	DNR State Park Maintainance area	2	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Sargent	DNR State Forest Maintainance area	1	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Sargent	DNR State Park Maintenance area	3	TPH	Soil	LUST	Remediation Not Required	NFA Letter	confirmation sampling and closure.
Sargent	INDOT Sub-District	7	TPH, BTEX/MTBE	Soil and Groundwater	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Initial Site Characterization and confirmation sampling.
Sargent	Shopping Mall, Former Auto Service Center	2	TPH	Soil	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Removal of a wasted oil UST, eight hydraulic lifts, and an oil/water separator. Over excavation of impacted soil and confirmation sampling.
Sargent	Manufacturer of cell phone housings	2	TPH, Metals	Soil	RCRA	Soil Excavation and Disposal	NFA Letter	Compressor oil impact (TPH) to the surface soils and over flow of soap based parts washer (silver and copper contamination). IDEM enforcement action. Excavation and disposal and confirmation sampling.
Harrington	Former Tractor Trailer Repair Center	1	Diesel Fuel	Soil and Groundwater	LUST	In-situ Biological Treatment Soil Excavation and Disposal	NFA Letter	Petroleum impacts identified during removal of two diesel USTs. Impacted soils removed. Nutrients and microbes introduced to subsurface to enhance bio-remediation of residual contamination.
Harrington	Former Municipal Airport	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Investigated a former airport consisting of 160 acres. Completed soil and groundwater remediation in a former UST cavity and hangar areas by excavation and off-Site disposal of over 5,000 tons of soil.
Harrington	Pharmaceutical Plant	1	Petroleum related COC including TPH, PAHs, and PCBs	Soil, Groundwater, and Concrete	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Investigated and delineated COC occurrence at former boiler house/maintenance facility. Completed soil remediation by excavation and off-Site disposal.
Harrington	Printing Facility	4	Lead	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Investigated and delineated lead occurrence in fill materials. Completed soil remediation by excavation and off-Site disposal.
Harrington	Retail Mall	4	TPH and PAHs	Soil and Groundwater	PRIVATE ACTION	No action required	Private action closure	Investigated the presence/absence of two large heating oil USTs through a geophysical survey and investigated subsurface condition around the closed heating oil tanks
Harrington	Golf Course	5	Lead	Groundwater	LUST	No action required	NFA Letter	Completed confirmatory groundwater sampling for lead from an existing well.
Harrington	Municipal Airport	5	TPH	Soil	LUST	Ex-situ soil treatment	NFA Letter	Completed confirmatory soil sampling at an on-Site land treatment cell.
Harrington	Highway ROW	2	TPH, BTEX, and PAHs	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Removed orphan tank and approximately 125 tons of petroleum-impacted soil discovered in state highway ROW.

KERAMIDA PROJECT EXPERIENCE
INDIANA SITE CLOSURES

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Harrington	Retail Store	4	Petroleum related COC including TPH and PAHs	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Removed kerosene tank. Investigation and delineation of COC occurrence in soil and groundwater. Completed a Site-specific evaluation of TPH occurrence per RISC Guidance. Investigation results were below the non-default Site-specific TPH closure levels. ERC for soil.
Harrington	Power Plant	4	Petroleum related COC including TPH and PAHs	Soil	PRIVATE ACTION	Risk Assessment	Private action closure	Completed hand augering in a former spill area. Completed a Site-specific evaluation of TPH occurrence per RISC Guidance. Investigation results were below the non-default Site-specific TPH closure levels. Recommended implementation of an ERC.
Harrington	Former Gas Station	4	Petroleum related COC	Groundwater	LUST	Risk Assessment	NFA Letter	Completed further site investigation for client including three borings using push-probe technology. Returned to site to collect one groundwater sample using low flow procedure to confirm the absence of lead occurrence. Data used to complete a risk-based closure.
Harrington	Contractor Maintenance Facility	4	Petroleum related COC including TPH	Soil	LUST	Risk Assessment	NFA Letter	IDEM requested a further site investigation of soil and groundwater around a former waste oil tank which was removed from a concrete encasement. Successfully negotiated a further site investigation sampling plan to confirm that a release of waste oil did not occur beyond the concrete encasement.
Harrington	Municipal Airport	4	Petroleum related COC including TPH, BTEX, and PAHs	Soil and Groundwater	LUST	Risk Assessment	NFA Letter	Completed a further site investigation of an apparent release from former USTs. Completed sampling plan for pre-approval by IDEM. Completed approximately 15 borings using push-probe technology.
Harrington	Contractor Maintenance Facility	3	Petroleum COC including TPH, BTEX, and PAHs	Soil	LUST	Ex-situ soil treatment	NFA Letter	Completed soil removal and treatment in an off-site land treatment cell. Unable to meet residential closure goals. Successfully negotiated closure of the treatment cell using using a non-default approach under the IDEM RISC guidance. The land treatment cell soils were evaluated against a site-specific TPH cleanup level developed using the Draft Washington State Department of Ecology (WDEC) TPH Guidance. Closure results were below the non-default Site-specific residential closure levels for TPH.
Harrington	Municipal Airport	4	Petroleum related COC including TPH and BTEX	Soil and Groundwater	LUST	Ex-situ soil treatment	NFA Letter	Investigation and delineation of COC occurrence in soil and groundwater. Removed approximately 1,500 tons of soil and treated in an on-site land treatment cell.
Harrington	Former Gas Station	4	Petroleum related COC including TPH and PAHs	Soil	LUST	Soil Excavation and Disposal	NFA Letter	Removed a waste oil tank and oil/water separator. Completed delineation activities using push-probe technology. Removed approximately 150 tons of petroleum-impacted soil.
Harrington	Manufacturing Facility	5	Petroleum related COC including TPH and PAHs	Soil and Groundwater	STATE CLEANUP	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Removed a concrete vault used to waste/cooling oil. Delineated COC occurrence in soil and groundwater. Removed approximately 80 tons of petroleum-impacted soil. Evaluated remaining soil impacts against a site-specific TPH cleanup level developed using the Draft Washington State Department of Ecology (WDEC) TPH Guidance. Closure results were below the non-default Site-specific industrial closure levels for TPH.

KERAMIDA PROJECT EXPERIENCE
INDIANA SITE CLOSURES

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Fedorchak	Former Printing Operation	4	cVOCs; TPH	Soil; groundwater	PRIVATE ACTION	Soil Vapor Extraction	Private action closure	Conducted vapor intrusion screening and modeling; designed and installed soil vapor abatement system in coordination with property developer and construction company. Site redeveloped as residential loft units.
Fedorchak	Industrial	4	TPH-GRO&DRO, VOCs, PNAs, Metals	Surface Soils	PRIVATE ACTION	Soil Excavation and disposal	Private action closure	Confirmation Sampling only
Fedorchak	Industrial	4	TPH-ERO	Surface Soils	PRIVATE ACTION	Soil Excavation and disposal	Private action closure	Confirmation Sampling only
Fedorchak	Industrial/Foundry	6	BTEX/MTBE & PNAs	Subsurface Soils & Groundwater	VRP	UST & soil removal and disposal	CNS letter	Traditional geoprobe soil/groundwater investigation.
Fedorchak	Gas Station	1	TPH-GRO&DRO, BTEX/MTBE, SVOCs	Subsurface Soils & Groundwater	LUST	ERC, Monitored natural attenuation	NFA Letter	Traditional geoprobe soil/groundwater investigation.
Goodwin	Nursery	4	TPH, Benzene, MTBE	Soil and GW	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	UST pull and excavation, delineation, NFA.
Goodwin	Residential	5	TPH	Soil	PRIVATE ACTION	Risk Assessment	Private action closure	Slightly impacted soils discovered, conducted TPH fractionation per RISC Guidance. Soils considerably below non-default levels.
Haviland	BROWNFIELDS; Former Foundry	5	TPH, SVOCs	Soil; groundwater	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	Completed a site-specific risk assessment to address potential health risks to future receptors including jail inmates jail employees. Site successfully redeveloped at county jail.
Haviland	Former Gas Stations, Mfg. Plants; Auto Shops	4	TPH; cVOCs; metals	Soil and groundwater	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Historic multi-use property being developed for residences and retail businesses; conducted vapor intrusion screening and modeling.
Mallin	Retail Fuel Station	2	Petroleum Fuels	Soil and GW	LUST	Monitored natural attenuation / risk analysis	NFA Letter	
Mallin	Retail Fuel Station	4	TPH, MTBE, Petroleum Fuels	Soil and GW	LUST	Monitored natural attenuation / risk analysis	NFA Letter	Project inactive for several years. Minimal impact, NFA issued after delineation and short period of monitoring.
Mallin	Resident	5	TPH, Diesel Fuel	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Diesel spill resulting from automobile accident; excavated impacted area, fully remediated.
Mallin	Private Property	4	No contaminants found	None	PRIVATE ACTION	No Remediation Required	Private action closure	UST removal, all samples clean.
Northam	Former Goodyear Tire/Battery/Auto (TBA)	5	Hydraulic Oil	Soil	LUST	Soil Excavation and Disposal, Risk Assessment	NFA Letter	Nondefault TPH closure goals identified using RISC guidance.
Northam	Former Kmart TBA	3	Hydraulic Oil	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Defined extent of soil impacts, provided estimated costs for remediation via excavation/disposal
Northam	Trolley Square		Diesel Fuel	Soil	PRIVATE ACTION	Soil Excavation and Disposal	Private action closure	Defined extent of soil impacts, provided estimated costs for remediation via excavation/disposal
Opell	Orphan UST in INDOT ROW	2	Petroleum	Soil	LUST	Soil Excavation and Disposal	Private action closure	INDOT ROW improvement discovery of orphan tank. Contractor excavated impacted soils. KEI provided disposal assistance and push probe services.
Opell	Interstate Hwy- Rest Area	2	Diesel Fuel Jet Fuel	Soil	LUST PRIVATE ACTION BROWNFIELDS	Soil Excavation and Disposal In-situ Soil Vapor Extraction Soil Excavation and Disposal	Private Action Closure Comfort Letter	Interstate Hwy - former heating oil tanks for rest area removed by contractor. KEI provided excavation assistance to INDOT contractor and disposal approval assistance. Industrial facility-operated and sampled already installed SVE network to monitor remediation. Brownfield site - discovered old UST as part of building demolition.

KERAMIDA PROJECT EXPERIENCE
INDIANA SITE CLOSURES

PROJ MGR	FACILITY TYPE	PRGI ADMIN REGION	CONTAMINANTS OF CONCERN	IMPACTED MEDIA	REGULATORY PROGRAM	REMEDIAL APPROACH	PROJECT STATUS	COMMENTS
Winningham	Manufacturing-Stamping Plant	7	TPH-DRO, TPH-ERO, BTEX, PAH	Soil	BROWNFIELDS	Soil Excavation and Disposal, Risk Assessment	Comfort Letter	PRGI project for Studebaker/Oliver Redevelopment Initiative. All of the visually impacted soil was removed and disposed. Closure confirmation samples were collected for DRO-ERO, BTEX and PAHs. Some samples exceeded the 100 mg/kg DRO-ERO closure standard; a Risk Assessment was performed to obtain closure.
Winningham	Road Construction Company-Materials and Equipment Yard	2	VOCs, TPH	Soil	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Site consisted of buried drums containing road surface treatment and curing compounds. Approximately 50 drums of surplus product was placed in a trench, crushed, and buried. Excavation proceeded until RISC Residential Closure Levels were achieved.
Zabonick	Retail Petroleum	1	Gasoline, Diesel	Soil and groundwater	LUST	Groundwater extraction and treatment	Private action closure	Document review
Zabonick	Industrial	2	Hydraulic Oil	Soil, groundwater, surface water	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Soil and groundwater investigation, spill
Zabonick	Retail Petroleum	1	Gasoline, Diesel	Soil and groundwater	LUST	Groundwater extraction and treatment	Private action closure	Document review
Zabonick	Heavy Manufacturing	1	Heavy Oils - Hydraulic, Diesel	Soil, groundwater, surface water	STATE CLEANUP	Soil Excavation and Disposal	NFA Letter	Ast release to tank farm and subsequent impact to receiving stream.

ATTACHMENT 7

U.S. Pharmaceuticals Group
Pfizer Inc.
P.O. Box 88
Terre Haute, IN 47808
Tel 812 299 2121

U.S. Pharmaceuticals

Rob, J.D. and Andy,
Great Job!
Thanks a lot.
Vicky

Ms. Vicki Keramida, President
Keramida Environmental , Inc.
330 N. College Ave.
Indianapolis, IN 46202

December 16, 1999

Dear Ms. Keramida :

Following the successful remediation of two PCB-contaminated areas at our site, I would like to take this opportunity to express my appreciation for the excellent services provided by your company and your subcontractor, Advanced Environmental Services, Inc.

The work was carried out in a professional manner from start to finish, with careful attention given to regulations, cost control, and safety. All personnel paid great attention to detail and were very conscious of the need to keep us advised of any changes in plans or schedule.

In particular, I would like to mention the following individuals:

Mr. Robert Fedorchak, Keramida
Mr. J. D. Kyle, Keramida
Mr. Andrew Gremos, Keramida
Mr. Johnie R. Baker, Advanced Environmental
Mr. Howard Evans, Advanced Environmental
Mr. Todd Kendall, Advanced Environmental

Please convey my appreciation to each of these individuals. Thank you.

Sincerely,

Michael A. Moroz, P.E., Sr. Project Engineer

CC: Mr. David Rader, Pfizer Vigo EH&S Manager
Mr. Steven F. Kemp, Pfizer NYO Principal, Environmental Engineering
Mr. Michael G. Mahoney, Pfizer NYO Attorney, Legal Div.
Mr. Johnie R. Baker, VP, Advanced Environmental Services, Inc.